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Supreme Court, U.S.

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IN THE
Supreme Court of the United States
OCTOBER TERM, 1992

CARDINAL CHEMICAL COMPANY, a partnership,
W.M. QUATTLEBAUM, JR., DOROTHY QUATTLEBAUM,
and W.M. QUATTLEBAUM, III, individuals,
CARDINAL MANUFACTURING CO., and
CARDINAL STABILIZERS, INC.,
Petitioners,
v.
MORTON INTERNATIONAL, INC.,
Respondent.

**PETITION FOR A WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF
APPEALS FOR THE FEDERAL CIRCUIT**

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QUESTION PRESENTED

Whether the Court of Appeals for the Federal Circuit errs when it vacates a declaratory judgment holding an asserted patent invalid merely because it determines that the patent is not infringed?

PARTIES TO PROCEEDING

All parties to the proceeding below are set forth in the caption to the case. Pursuant to Rule 29.1 of the Rules of this Court, petitioners state that none of them have any non-wholly owned subsidiaries, nor do they have any parent corporations.

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Petitioners Cardinal Chemical Company, W. M. Quattlebaum, Jr., Dorothy Quattlebaum, and W.M. Quattlebaum, III, Cardinal Manufacturing Co. and Cardinal Stabilizers, Inc. (hereinafter "Cardinal" or "Petitioners") respectfully petition for a writ of certiorari to review the decision of the United States Court of Appeals for the Federal Circuit, entered in the above-entitled proceeding on March 20, 1992.

OPINION BELOW

The opinion of the Court of Appeals for the Federal Circuit is reported at 959 F.2d 948 and 22 U.S.P.Q.2d

1231 and reproduced in Appendix ("App.") A, pp. 1a-15a. The opinion of Chief Judge Nies of the Federal Circuit dissenting from the orders declining suggestions for rehearing in banc, entered June 24, 1992, has not yet been reported; it is reproduced in App. B, pp. 16a-31a. The opinion and order of the district court, entered December 12, 1990, is not reported; the public version of the opinion is reproduced in App. C, pp. 32a-70a.

JURISDICTION

The judgment of the Court of Appeals was entered on March 20, 1992. The petitions for rehearing were denied on April 17, 1992. Apps. D-E, pp 71a-72a. This Court has jurisdiction to review the judgment of the Court of Appeals pursuant to 28 U.S.C. § 1254(1).

STATUTORY PROVISIONS INVOLVED

The Declaratory Judgment Act, 28 U.S.C. § 2201, provides in pertinent part:

(a) In a case of actual controversy within its jurisdiction, except with respect to Federal taxes other than actions brought under section 7428 of the Internal Revenue Code of 1986, [26 U.S.C. § 7428] a proceeding under section 505 or 1146 of title 11 [11 U.S.C. § 505 or 1146], or in any civil action involving an antidumping or countervailing duty proceeding regarding a class or kind of Canadian merchandise, as determined by the administering authority, any court of the United States, upon the filing of an appropriate pleading, may declare the rights and other legal relations of any interested party seek-

ing such declaration, whether or not further relief is or could be sought. Any such declaration shall have the force and effect of a final judgment or decree and shall be reviewable as such.

STATEMENT OF THE CASE

The respondent, Morton International, Inc. ("Morton" or "Respondent"), filed the present suit on April 12, 1983 in the United States District Court for the District of South Carolina alleging infringement by Cardinal of United States Patents 4,062,881 and 4,120,845. The claims of Morton's patents cover certain organotin compounds. Cardinal filed a counterclaim pursuant to the Declaratory Judgment Act, 28 U.S.C. § 2201, seeking a declaration that Morton's patents were invalid.

While the present suit was pending, Morton sued Argus Chemical Corporation in the United States District Court for the Eastern District of Louisiana for infringement of the same two patents. After a trial on the merits, the court found Morton's patents to be invalid and not infringed. *Morton Thiokol, Inc. v. Witco Chemical Corp. and Argus Chem. Corp.*, No. 84-5685 (E.D. La. 1988). On appeal, the Court of Appeals for the Federal Circuit affirmed the finding of noninfringement and vacated the finding of invalidity. *Morton Thiokol, Inc. v. Argus Chem. Corp.*, 873 F.2d 1451, 11 U.S.P.Q.2d 1152 (Fed. Cir. 1989) (non-precedential).¹

¹ Morton has filed a third suit alleging infringement of its patents, *Morton Int'l, Inc. v. Atochem N. America, Inc.*, No. 87-60-CMW (D. Del.). That case is presently in the discovery phase.

Subsequently, the present suit went to trial. The district court found the patents not infringed and granted Cardinal's request for declaratory judgment that the patents were invalid. App. C, p. 70a. The court, however, denied Cardinal's request for a finding that the case was exceptional under 35 U.S.C. § 285. App. C, pp 69a-70a.

Morton appealed the district court's decision on the issues of validity and infringement and Cardinal cross-appealed the determination of exceptional case to the Federal Circuit. The Federal Circuit affirmed the district court's finding of noninfringement, but vacated the determination of invalidity. As justification for its decision, the court stated:

Since we have affirmed the district court's holding that the patents at issue have not been infringed, we need not address the question of validity. *Vieau v. Japax, Inc.*, 823 F.2d 1510, 1517, 3 U.S.P.Q.2d 1094, 1100 (Fed. Cir. 1987). Accordingly, we vacate the holding of invalidity.

App. A, p. 9a.

In a virtually unprecedented scenario, both Morton, the patent owner, and Cardinal, the accused infringer, petitioned the panel for rehearing arguing that the court should not vacate but should reach the validity issue. The Court denied both petitions. Apps. D-E, pp. 71a-72a. Following the panel's denial of the petitions for rehearing, the full court, by a divided vote, denied both parties' suggestions for rehearing in banc. Apps. F-G, pp. 73a-74a. Chief Judge Nies, and Judges Rich and Lourie dissented from the denial

of rehearing in banc, with Chief Judge Nies issuing a separate dissenting opinion. App. B, pp. 16a-31a.

The court's decision to vacate the finding of invalidity was not an isolated incident. The Federal Circuit began to review declaratory judgments of patent invalidity soon after it was given exclusive subject matter jurisdiction over patent appeals, 28 U.S.C. § 1295(a)(1). In fact, initially the court routinely reviewed judgments as to validity before or in conjunction with judgments of noninfringement. *See, e.g., Mannesmann Demag Corp. v. Engineered Metal Prod.*, 793 F.2d 1279 (Fed. Cir. 1986).

On June 16, 1987, the Federal Circuit issued two decisions which dramatically departed from this practice. Those decisions held that in cases in which the accused infringer has obtained a declaratory judgment of invalidity, the court's holding of noninfringement renders the issue of validity "moot" and requires that the declaratory judgment be vacated. *Vieau v. Japax, Inc.*, 823 F.2d 1510, 1517 (Fed. Cir. 1987); *Fonar Corp. v. Johnson & Johnson*, 821 F.2d 627, 634 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1027 (1988).

Since *Vieau* and *Fonar*, the Federal Circuit has routinely vacated declaratory judgments of invalidity upon finding noninfringement. *See, e.g., Environmental Instruments, Inc. v. Sutron Corp.*, 877 F.2d 1561, 1566 (Fed. Cir. 1989); *Sun-Tek Indus., Inc. v. Kennedy Sky Lites, Inc.*, 848 F.2d 179, 183 (Fed. Cir. 1988), *cert. denied*, ___ U.S. ___, 109 S. Ct. 793 (1989); *Advance Transformer Co. v. Levinson*, 837 F.2d 1081, 1084 (Fed. Cir. 1988); *Perini America, Inc. v. Paper*

Converting Mach. Co., 832 F.2d 581, 584 n.1 (Fed. Cir. 1987).²

The court's practice in this regard has developed into a *per se* rule which has been the subject of significant criticism. See H. Wegner, *Morton, The Dual Loser Patentee: Frustrating Blonder-Tongue*, 74 J. Pat. & Trademark Off. Soc'y 344 (1992); J. Donofrio, *The Disposition of Unreviewable Judgments by the Federal Circuit*, 73 J. Pat. & Trademark Off. Soc'y 462 (1991); J. Re and W. Rooklidge, *Vacating Patent Invalidity Judgments Upon an Appellate Determination of Noninfringement*, 72 J. Pat. & Trademark Off. Soc'y 780 (1990); R. Harmon, *Patents & the Federal Circuit*, 551-54 (2d ed. 1991). It is this practice, as employed in the present case, which is the subject of this petition.

REASONS FOR GRANTING THE PETITION

SUMMARY OF ARGUMENT

The Federal Circuit's practice of vacating declaratory judgments of patent invalidity is predicated upon an unjustified extension of decisions of this Court and a fundamental misunderstanding of the doctrine of mootness. The court has taken what should be a

² Upon a finding of no infringement, the court also routinely vacates invalidity judgments resulting from a validity challenge raised as an affirmative defense. See, e.g., *Tol-O-Matic v. Proma Produkt-Und Mktg.*, 945 F.2d 1546, 1550 (Fed. Cir. 1991); *Winner Int'l Corp. v. Wolo Mfg. Corp.*, 905 F.2d 375, 377 (Fed. Cir. 1990); *Julien v. Zeringue*, 864 F.2d 1569, 1571 (Fed. Cir. 1989). The court, however, does not follow the practice as consistently with respect to affirmative defenses as it does in cases raising invalidity as a counterclaim. See, e.g., *Consolidated Aluminum Corp. v. Foseco Int'l*, 910 F.2d 804 n.4 (Fed. Cir. 1990).

discretionary decision and turned it into a *per se* practice. It has thereby abdicated its responsibilities and has subverted the most basic principles of the Declaratory Judgment Act, the policies of this Court and the patent laws.

The erroneous nature of the Federal Circuit's practice is most starkly illustrated by the anomalous result in this case. The patents at issue had already been found invalid by one district court at the time this case went to trial. Morton, however, was not collaterally estopped from asserting those patents because the district court's finding of invalidity was vacated by the Federal Circuit pursuant to the practice at issue in this petition. After incurring significant litigation costs, Cardinal prevailed on its declaratory judgment claim only to have that second judgment of invalidity vacated by the Federal Circuit. Morton's third action alleging infringement of these patents, with their presumption of validity accorded under 35 U.S.C. § 282, is now pending before the Delaware district court.

The Federal Circuit's practice erroneously deprives accused infringers of their district court judgment of invalidity and patent owners of a definitive judgment. This practice subverts the Declaratory Judgment Act by dramatically limiting its effect. Further, the practice undermines the policy announced by this Court in *Blonder-Tongue* by allowing relitigation of previously invalidated patents. Finally, the practice frustrates the patent laws by permitting the maintenance of tainted patents. The Federal Circuit has refused on many occasions to revise this practice. Accordingly, granting of this Petition is appropriate pursuant

to Rule 10.1(c) of the Rules of this Court.³ Moreover, Chief Judge Nies recognized in her dissent from the orders denying in banc consideration that “[t]he parties can now look only to the Supreme Court for correction.” App. B, p. 31a.

I. THE BASES FOR THE FEDERAL CIRCUIT’S POSITION THAT DECLARATORY JUDGMENTS OF PATENT INVALIDITY ARE RENDERED MOOT BY THE AFFIRMANCE OF A JUDGMENT OF NONINFRINGEMENT ARE ERRONEOUS

The Federal Circuit erroneously based its vacation of the declaratory judgment in this case upon its routine practice of vacating such judgments when it has upheld the district court’s judgment of noninfringement. App A., p. 9a. The Federal Circuit predicates this practice upon the premise that once the court has determined noninfringement as to the same patent or claims of the patent there no longer exists controversy between the parties and thus the question of validity is moot. See, e.g., *Sun-Tek*, 848 F.2d at 183 (validity issue “moot”); *Advance Transformer*, 837 F.2d at 1084 (validity issue “mooted”); *Perini*, 832 F.2d at 584 n.1 (validity issue “moot”). This practice is based upon an overly broad reading of the decisions of this Court as well as a fundamental misunderstanding of the doctrine of mootness.

First, the predicate for the Federal Circuit’s determination that the invalidity claim is moot flows

³ Because the Federal Circuit has exclusive jurisdiction over patent matters, a conflict among the Circuits on this issue is not possible. Certiorari is, nevertheless, clearly appropriate in such instances. *Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126, 128 (1942).

primarily from two of this Court’s cases, *Electrical Fittings Corp. v. Thomas & Betts Co.*, 307 U.S. 241 (1939), and *Altwater v. Freeman*, 319 U.S. 359 (1943). As Chief Judge Nies cogently points out, neither of these cases supports the Federal Circuit’s practice. In fact, these cases actually support an opposite result in this case. App. B, pp. 19a-22a.

In *Electrical Fittings*, this Court held that defendants in a patent infringement suit which had been dismissed for failure to prove infringement were entitled to have eliminated that portion of the judgment which, in ruling on the defendant’s affirmative defense, held one of the claims of the patent valid. 307 U.S. at 242. This holding is predicated upon the principle that no defendant in any lawsuit has the right to an adjudication of issues raised by way of affirmative defenses if the plaintiff has not made a *prima facie* case.

Altwater involved the question of whether a declaratory judgment counterclaim for invalidity should be treated the same as an affirmative defense of invalidity had been treated in *Electrical Fittings*. The Court found that it should not. Specifically, the Court found that a counterclaim for declaratory judgment of invalidity is fundamentally different from an affirmative defense of invalidity and must be decided so long as a case or controversy continues to exist at the time the case is under review. 319 U.S. at 363-64.

The Federal Circuit has interpreted these decisions as holding that, upon a finding of noninfringement, counterclaims for declaratory judgment of invalidity must be evaluated to determine whether there exists a controversy beyond the dispute delineated in the

patentee's infringement claim. If no such controversy is found, the declaratory judgment is vacated as "moot." *Vieau*, 823 F.2d at 1518-21 (J. Bennett, concurring); *Fonar*, 821 F.2d at 634; *Advance Transformer*, 837 F.2d at 1084. *Altwater* neither supports, nor requires such an analysis.

As set forth in Chief Judge Nies' dissent, *Altwater* must be read in context. App. B, pp. 21a. The party seeking a declaratory judgment of invalidity in *Altwater* was a licensee. At the time *Altwater* was decided, the doctrine of licensee estoppel limited a licensee's ability to attack the validity of the licensed patent to a very narrow set of circumstances.⁴ This Court's discussion of case or controversy in *Altwater* was quite clearly limited to the question of the continued viability of a declaratory judgment counterclaim raised by a licensee and must be read in that context. The Federal Circuit has extended *Altwater* to situations neither contemplated nor addressed in that decision. As Chief Judge Nies stated:

To interpret *Altwater* broadly as requiring an accused infringer who is not a licensee to prove that its counterclaim for invalidity goes beyond the scope of the patentee's complaint in order to establish a case or controversy has never been warranted. Such an extension of *Altwater* leads to the absurd result that an accused infringer can obtain a declaratory judgment for claims of the patent which were not asserted in the patentee's suit but not those that were, whereas the patentee's suit

⁴This Court overruled the doctrine of licensee estoppel in *Lear, Inc. v. Adkins*, 395 U.S. 653 (1969).

in itself shows that the controversy rages as to the asserted patent claims.

App B., p. 21a (emphasis in original).

Secondly, the Federal Circuit's practice of vacating invalidity determinations upon a finding of noninfringement is based upon a fundamental misunderstanding of the doctrine of mootness. As Chief Judge Nies notes, mootness comes in two forms: (1) "jurisdictional" mootness, which arises when the dispute underlying an issue no longer exists and thereby deprives the court of jurisdiction over the case, *i.e.*, there is no case or controversy, *Powell v. McCormack*, 395 U.S. 486, 496 n.7 (1969); and (2) "prudential" mootness which occurs when a court chooses, as a matter of discretion, to address one dispositive issue rather than another. See *United States v. Leon*, 468 U.S. 897, 924-25 (1984); *Penthouse Int'l v. Meese*, 939 F.2d 1011, 1019-20 (D.C. Cir. 1991); *Air Line Pilots Ass'n, Int'l v. UAL Corp.*, 897 F.2d 1394, 1397 (7th Cir. 1990); App. B, p. 24a.

In vacating declaratory judgments of invalidity, the Federal Circuit confuses and, accordingly, improperly merges the two forms of mootness. When first enunciating in *Vieau* the rationale for its practice of vacating declaratory judgments of invalidity, the Federal Circuit held:

Since there is no indication in the present case that the controversy between the parties extends beyond the accused devices found to be non-infringing, this court properly exercises its discretion to dismiss the cross-appeal in this case as moot.

823 F.2d at 1521. Such a holding is self-contradictory. If there truly is no case or controversy, vacation is not discretionary, but required. Conversely, if the court is exercising its discretion, it must be doing so for reasons other than the lack of a case or controversy.

Despite the Federal Circuit's confusion, it is clear that the court's practice of vacating declaratory judgments of invalidity should be one of discretion, rather than mandate. This is the case regardless of the scope of the patentee's infringement suit. As Judge Lourie noted in his concurring opinion:

when both infringement and validity issues are presented on appeal, we can base our affirmance on both grounds, thereby leaving a complete judgment available for review by the Supreme Court. We are not compelled to address both or to address them in any order. The power to choose one or the other is not a matter of policy, but of discretion, considering the circumstances of the individual case.

App. A, pp. 12a-13a; *see also* App. B, pp. 25a-26a.

Decisions of this Court support Judge Lourie's conclusion. In *Deposit Guaranty Nat'l Bank v. Roper*, 445 U.S. 326 (1980), this Court, in discussing its decision in *Electrical Fittings*, noted the distinction between a "judgment in favor of a party at an intermediate stage of litigation" and "the definitive mootness of a case or controversy, which ousts the jurisdiction of the federal courts and requires dismissal of the case." *Deposit Guaranty*, 445 U.S. at 335. This distinction means that while a claim, such as Cardinal's counterclaim for declaratory judgment

of invalidity may become moot pending the appellate court's decision on the merits, *United States v. Munsingwear, Inc.*, 340 U.S. 36, 39 (1950), it cannot be jurisdictionally mooted by the Federal Circuit's holding of noninfringement. *Karcher v. May*, 484 U.S. 72, 84 (1987) (*Munsingwear* doctrine does not apply when "controversy did not become moot due to circumstances unattributable to any of the parties").

The Federal Circuit's practice is clearly not supported either by the decisions of this Court or by the mootness doctrine. The remainder of this petition will demonstrate that the court's practice is not even a proper exercise of discretion, but merely the rote incantation of a policy. This practice effectively eviscerates basic policies of the Declaratory Judgment Act, this Court's ruling in *Blonder-Tongue* and the United States patent system.

II. THE FEDERAL CIRCUIT'S PRACTICE OF VACATING DECLARATORY JUDGMENTS OF INVALIDITY WHEN NO INFRINGEMENT IS FOUND IS AN ABUSE OF DISCRETION WHICH SUBVERTS THE DECLARATORY JUDGMENT ACT AND THE PUBLIC POLICIES WHICH UNDERLIE THE PATENT SYSTEM

A. Application Of A *Per Se* Rule To A Discretionary Matter Is Reversible Error

The Federal Circuit's practice of vacating declaratory judgments of patent invalidity upon a finding of noninfringement has become a fixed practice. One Judge refers to the practice as the court's "established procedure." *Gould v. Control Laser Corp.*, 866 F.2d 1391, 1397 (Fed. Cir. 1989) (J. Nichols, dissenting). In consistently relying on this "established procedure," the court is not exercising discretion, but improperly establishing a rule. It is a consistent prin-

ciple of law that "the application of a *per se* rule to a matter that requires the exercise of discretion would constitute reversible error." *Perez v. Ortiz*, 849 F.2d 793, 798 (2d Cir. 1988) (citing *Plunkett v. Johnson*, 828 F.2d 954, 956 (2d Cir. 1987)).

As this Court has explained: "a rule applicable to all cases is not to exercise discretion. Such a rule ignores the differences which invoke discretion, and which can alone justify its exercise" *United States ex rel. Steinmetz v. Allen*, 192 U.S. 543, 563 (1904).

Thus, the Federal Circuit's discretion is not unlimited, but circumscribed by "the differences which invoke discretion." Among the "differences" which circumscribe the court's discretion in this case are the Declaratory Judgment Act and the policies this Court has enunciated with respect to the operation of the patent laws.

B. Declaratory Judgment Act

The Declaratory Judgment Act was enacted to provide a remedy to persons seeking a declaration of their rights in cases of actual controversy. 19 U.S.C. § 2201. It has been held that:

The two principal criteria guiding the policy in favor of rendering declaratory judgments are (1) when the judgment will serve a useful purpose in clarifying and settling the legal relations in issue, and (2) when it will terminate and afford relief from uncertainty, insecurity and controversy giving rise to the proceeding.

Grand Trunk Western R.R. Co. v. Consolidated Rail Corp., 746 F.2d 323, 326 (6th Cir. 1984) (quoting E. Bourchard, *Declaratory Judgments* 299 (2d ed. 1941)).

As the Federal Circuit itself has recognized, the ability to obtain declaratory judgments is particularly important in patent cases. *Arrowhead Indus. Water, Inc. v. Ecolochem, Inc.*, 846 F.2d 731, 735 (Fed. Cir. 1988) ("After the Act, those competitors were no longer restricted to an *in terrorem* choice between the incurrance of a growing potential liability for patent infringement and abandonment of their enterprises"); *Goodyear Tire & Rubber Co. v. Releasomers*, 824 F.2d 953, 956 (Fed. Cir. 1987) (the purpose of the Declaratory Judgment Act "in patent cases is to provide the allegedly infringing party relief from uncertainty and delay regarding its legal rights"); see also *Altwater*, 319 U.S. at 365; Bourchard at 815.

In light of its recognition of the importance of declaratory judgments in the patent context, it is particularly ironic that the Federal Circuit, through its practice of routinely vacating such judgments, only allows a defendant infringer to avail itself of the remedy of invalidating the patent in those situations in which it has first been found guilty of infringement.

It is well recognized that an alleged infringer may still have a reasonable apprehension of future litigation and, thus, a viable claim under the Declaratory Judgment Act even when the infringement claim has been withdrawn. *Shelcore, Inc. v. Durham Indus., Inc.*, 745 F.2d 621, 624 (Fed. Cir. 1984) ("But Shelcore could not unilaterally remove the invalidity issue because Durham's counterclaim put the validity of all the claims in issue"); *Air Vend, Inc. v. Thorne Indus., Inc.*, 625 F. Supp. 1123, 1128 (D. Minn. 1985), *aff'd*,

831 F.2d 306 (Fed. Cir. 1987). Nevertheless, the Federal Circuit's *per se* practice presumes the counterclaim for invalidity to be redundant and, therefore, fails even to consider the possibility of a continuing controversy.

In this case, the district court entered judgments on both the affirmative claim of infringement and the counterclaim of invalidity. App. C, p. 70a. Implicit in the district court's holding, therefore, is the conclusion that a judgment on the counterclaim was necessary to settle the rights of the parties more completely.⁵ *Altwater*, to the extent it remains viable, appears to mandate that the Federal Circuit review both judgments on the merits under such circumstances. 319 U.S. at 363-64. By vacating the judgment on the counterclaim instead, the Federal Circuit has effectively overruled the district court's determination that judgment on the counterclaim was necessary and, thereby, deprived Cardinal of its judgment without any reason save the invocation of its policy and a citation to *Vieau*.

As noted above, the purpose of the Declaratory Judgment Act is to provide relief when "the judgment will serve a useful purpose," and when it "will terminate and afford relief from uncertainty, insecurity, and controversy." *Grand Trunk*, 746 F.2d at 326. In the patent context, the Act provides a party with relief from "uncertainty and delay regarding its legal rights." *Goodyear*, 824 F.2d at 956.

Reviewing the district court's judgment that Morton's patents are invalid clearly serves these purposes

⁵ Chief Judge Nies noted this fact in her opinion dissenting from the suggestion for rehearing in banc. App. B, pp. 29a.

regardless of the Federal Circuit's finding of no infringement. As Judge Nies pointed out:

Once the patentee creates a legitimate fear in an adversary that the patent will be asserted against it, nothing short of the patentee's unconditional guarantee not to do so under any circumstances ordinarily will remove that apprehension and thereby jurisdictionally moot the claim for declaratory relief.

App. B, p. 27a. Cardinal did not assert its counterclaim merely as an affirmative defense, but rather to obtain a declaration of its legal rights in the face of general threats from Morton regarding alleged infringement of Morton's patents. Moreover, Cardinal manufactures and continues to develop products containing organotin compounds similar to those subject to Morton's infringement charges. The Declaratory Judgment Act entitles Cardinal to "relief from uncertainty, insecurity, and controversy" with regard to these issues. The Federal Circuit, without rational explanation, has deprived Cardinal of that relief.

C. Patent Policy

In *Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation*, 402 U.S. 313 (1971), this Court extended the principle of collateral estoppel in the patent context. Specifically, this Court held that a party who has had one full and fair opportunity to litigate the validity of a patent is estopped from relitigating the same issue in a subsequent action against a different defendant. In support of this conclusion this Court found that there is "an arguable misallocation of resources" in permitting "a litigant more

than one full and fair opportunity for judicial resolution of the same issue." *Id.* at 328-29. This misallocation is particularly acute in patent cases as "the expense of defending a patent suit is often staggering to the small businessman." *Id.* at 334 (quoting *Picard v. United Aircraft Corp.*, 128 F.2d 632, 641 (2d Cir. 1942) (J. Frank, concurring)).

The Federal Circuit's practice of vacating, as a matter of course, declaratory judgments of patent invalidity when there is a finding of no infringement flies in the face of both the letter and the spirit of *Blonder-Tongue*. Nowhere is this more starkly demonstrated than by the facts of this case.

Had the Federal Circuit not vacated the *Argus* judgment, this case would never have gone to trial. *Blonder-Tongue* would have collaterally estopped Morton from relitigating the patents. Instead, Cardinal was forced to expend over a million dollars on state of the art experiments and on attorneys fees and costs in defending itself and prosecuting its declaratory judgment counterclaim.

The Federal Circuit, however, added insult to injury. By vacating the declaratory judgment in *Argus*, the court permitted Morton to continue its suit against Cardinal and then used the same practice to deprive Cardinal of its hard earned declaratory judgment. Moreover, despite having its patents found invalid by two district courts, the court has given Morton license to pursue a third action on these patents which is currently pending before the Delaware district court.

Such an anomalous scenario was precisely what this Court sought to prohibit in *Blonder-Tongue*. As it stands, Morton has had not one but two "full and

fair opportunities" to resolve the validity of its patents and is in the midst of its third. Cardinal, a small family-owned business, has incurred "staggering" expenses in invalidating the patents, yet remains exposed to future suits by a direct competitor which has shown a determination to aggressively enforce these patents. The resources of all of the parties, the district courts and the Federal Circuit are clearly wasted by this practice. Thus, the Federal Circuit is frustrating the policies enunciated in *Blonder-Tongue* without articulating any competing policies to justify its practice.

Next, the Federal Circuit's practice is directly contrary to this Court's instruction in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327 (1945), that in a patent infringement suit, the better practice is to inquire fully into the validity of the patent at issue, and not to dispose of the suit without going into the question of validity. *Id.* at 330. The Court indicated that the basis for this policy was that "of the two questions, validity has the greater public importance." *Id.*; see also *Cover v. Schwartz*, 133 F.2d 541 (2d Cir. 1942).

Finally, the Federal Circuit's practice derogates Congressional intent embodied in 35 U.S.C. § 112. Congress has chosen to reward inventors of new and useful devices with a patent only after stringent requirements for patentability embodied in the Patent Act have been met and, even then, only for a limited term. A patent rewards an inventor for creating something which did not previously exist and from which the public may benefit. It follows that objects not possessing the qualities of invention, novelty and nonobviousness or other statutory criteria for pat-

entability, do not qualify for patent protection, but properly belong in the public domain. Therefore, a patent which fails to meet the Congressionally imposed criteria is "anomalous" and a blight against the integrity of the patent system. *Blonder-Tongue*, 402 U.S. at 343; *Lear, Inc. v. Adkins*, 395 U.S. 653, 670 (1969).

This is one of the reasons the Declaratory Judgment Act is particularly important in the patent context. The Federal Circuit has itself recognized this fact:

[t]he Act serves the policies underlying the patent laws by enabling a test of the validity and infringement of patents that are possibly being used only as what Learned Hand, in *Bresnick v. United States Vitamin Corp.*, 139 F.2d 239, 242, 59 U.S.P.Q. 345, 348 (2d Cir. 1943), called "scarecrows."

Arrowhead, 846 F.2d at 735 n.4.

Despite recognition of the strong policy interest in removing invalid patents from the books, however, the Federal Circuit, through its practice of routinely vacating declaratory judgments of invalidity, has allowed scores of such patents to remain in force. Allowing Morton to retain its patent monopoly after twice having its patents found invalid does great violence to the most basic principles of the patent system.

III. CONCLUSION

For all the reasons set forth herein, Petitioners respectfully request that the Court issue a writ of certiorari to review the judgment of the Court of Appeals for the Federal Circuit.

Respectfully submitted,

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Dated: July 16, 1992

APPENDIX

APPENDIX A

United States Court of Appeals for the Federal Circuit

91-1174,-1175

MORTON INTERNATIONAL, INC.,
Plaintiff -Appellant,

v.

CARDINAL CHEMICAL COMPANY, a partnership,
W.M. QUATTLEBAUM, JR., DOROTHY QUATTLEBAUM,
and W.M. QUATTLEBAUM, III, individuals,
CARDINAL MANUFACTURING CO., and
CARDINAL STABILIZERS, INC.,
Defendants/Cross-Appellants.

Gordon R. Coons, *Leydig, Voit & Mayer*, of Chicago, Illinois, argued for plaintiff-appellant. With him on the brief were *John E. Resenquist* and *Jeffrey S. Ward*. Also on the brief was *Gerald K. White*, Morton International, Inc., of Chicago, Illinois.

Charles F. Schill, *Adduci, Mastriani, Meeks & Schill*, of Washington, D.C., argued for defendants/cross-appellants. With him on the brief were *William O. Sweeny III*, *Arthur L. Coleman*, *Nelson Mullins* and *Elizabeth R.P. Bowen*, *Riley & Scarborough*, of Columbia, South Carolina.

Jerome G. Lee, of Arlington, Virginia, was on the brief for Amicus Curiae, American Intellectual Property Law Association. With him on the brief were *William C. Rooklidge* and *Joseph R. Re*, *Knobbe, Martens, Olson & Bear*, of Newport Beach, California. Also on the brief were *Walter N. Kirn* and *William L. LaFuze*, of counsel.

Brian G. Brunsvold, *Finnegan, Henderson, Farabow, Garrett & Dunner*, of Washington, D.C., was on the brief

for Amicus Curiae, Atochem North America, Inc. With him on the brief were *Herbert H. Mintz*, *Richard B. Racine* and *Michael D. Kaminski*. Also on the brief was *Stanley A. Marcus*, Deputy General Counsel - Patents, Atochem North America, Inc., Philadelphia, Pennsylvania, of counsel.

Appealed from: U.S. District Court for the
District of South Carolina

Judge Catoe

United States Court of Appeals for the Federal Circuit

91-1174,-1175

MORTON INTERNATIONAL, INC.,
Plaintiff -Appellant,

v.

CARDINAL CHEMICAL COMPANY, a partnership,
W.M. QUATTLEBAUM, JR., DOROTHY QUATTLEBAUM,
and W.M. QUATTLEBAUM, III, individuals,
CARDINAL MANUFACTURING CO., and
CARDINAL STABILIZERS, INC.,

Defendants/Cross-Appellants.

Decided: March 20, 1992

Before MAYER, LOURIE, and CLEVINGER, *Circuit Judges*.

PER CURIAM.

This appeal and cross-appeal are from the December 14, 1990, judgment of the United States District Court for the District of South Carolina, 6:83-889-OK. The patentee, Morton International, Inc., contends that the district court erred in finding its U.S. Patents 4,062,881 ('881) and 4,120,845 ('845) not infringed by Cardinal Chemical Company, et al.; and in concluding that both patents are invalid. Cardinal contends that the district court erred in failing to award attorney fees for an exceptional case under 35 U.S.C. § 285, and that this court should sanction Morton's appeal as frivolous. We affirm the court's judgment in all respects, except we vacate that part of the

judgment holding the '881 and '845 patents invalid. We also reject Cardinal's assertion that this appeal is frivolous.

BACKGROUND

The patents in suit are directed to a family of compounds which are used as additives or heat stabilizers for polyvinyl chloride (PVC). The heat stabilizers protect the PVC from decomposition, discoloration, and loss of strength. The particular heat stabilizers disclosed in the '881 and '845 patents are directed to organotin compounds, in particular to organotin mercaptoalkyl carboxylic acid ester sulfides. Only Claim 1 of each patent is at issue.¹ The key limitations of the claims are (1) the bonding of the organotin compound, referred to by the parties as "partial connectivity," wherein a tin atom is bonded to a sulfur atom, the sulfur atom is bonded to a second tin atom, and the second tin atom is bonded to a mercaptoalkyl ester (referred to by the parties as a "reverse ester"); and (2) "the organotin compound [has] an amount of tin within the range from 10 to 42% by weight and an amount of sulfur within the range from 8 to 42% by weight."

¹ Claim 1 of the '881 patent is representative for our purposes:

1. A monoorganotin or diorganotin mercaptoalkyl ester of a carboxylic acid or mercapto hydroxyalkyl ester of a carboxylic acid mono or polysulfide useful as a stabilizer for improving the resistance to deterioration of vinyl chloride polymers when heated at 350°F, containing at least one tin atom [sic, atom] having one to two hydrocarbyl groups having from 1 to 20 carbon atoms and selected from the group consisting of alkyl, aryl, cycloalkyl, aralkyl and alkenyl and linked to the tin through carbon, at least one mercaptoalkyl ester of a carboxylic acid group linked to tin through the sulfur of the mercaptoalkyl group and at least one mono or polysulfide sulfur group bonded exclusively to tin, the organotin compound having an amount of tin within the range from 10 to 42% by weight and an amount of sulfur within the range from 8 to 42% by weight.

The '881 and '845 patents have had considerable exposure to the courts, as Morton has filed infringement actions in three separate district courts against different defendants. In the first, Morton filed suit against Argus Chemical Corporation in the United States District Court for the Eastern District of Louisiana. After trial, the district court entered judgment, holding the patents invalid and not infringed. *Morton Thiokol, Inc. v. Witco Chemical Corp.*, et al. No. 84-5685 (E.D. La., filed November 28, 1984).

On appeal, we affirmed the district court's judgment of noninfringement and vacated the invalidity judgment, ruling that the affirmance made it unnecessary to review the issue of invalidity. *Morton Thiokol, Inc. v. Argus Chemical Corp.*, No. 88-1553, 11 USPQ2d 1152 (Fed. Cir., April 3, 1989) (non-precedential).

In the second action, the appeal of which is now before this court, Morton again filed suit, this time against Cardinal, alleging that Cardinal sold mixtures containing the claimed compounds. After trial, the district court made lengthy findings and conclusions and held that the claims were invalid under 35 U.S.C. § 112 because the specification was not enabling and the claims were indefinite. It further held that Cardinal's heat stabilizer products did not infringe those claims, either literally or under the doctrine of equivalents. Morton and Cardinal now appeal and cross-appeal this judgment, requiring us to review once more the infringement and/or validity of the '881 and '845 patents.²

² A third action, filed by Morton against Atochem North America, Inc. in the United States District Court for the District of Delaware for infringing the same Morton patents, is in the discovery phase. *Morton International, Inc. v. Atochem North America, Inc.*, No. 87-60-CMW (D. Del., filed February 9, 1987). Atochem has filed a brief as *amicus curiae* in the present appeal, urging the affirmance of the district court's judgment of invalidity. The American Intellectual Property Law Association has also filed a brief as *amicus curiae*.

DISCUSSION

I.

A finding of literal infringement requires that the asserted claims, as properly construed, read on the accused product. *Envirotech Corp. v. Al George, Inc.*, 730 F.2d 753, 758, 221 USPQ 473, 477 (Fed. Cir. 1984). The patentee has the burden of proving infringement by a preponderance of the evidence. *SmithKline Diagnostics, Inc. v. Helena Laboratories Corp.*, 859 F.2d 878, 889, 8 USPQ2d 1468, 1477 (Fed. Cir. 1988). The first step in determining infringement is thus to construe the claims. *Fonar Corp. v. Johnson & Johnson*, 821 F.2d 627, 631, 3 USPQ2d 1109, 1112 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1027 (1988). The second step is to decide whether each limitation in the properly construed claims is found, either literally or equivalently, in the allegedly infringing compounds. *Id.* Although claim interpretation is a question of law, subject to *de novo* review on appeal, the district court's ultimate finding on infringement, as well as subordinate findings relating to proper claim construction, are issues of fact, reviewed under a clearly erroneous standard. *See H.H. Robertson, Co. v. United Steel Deck, Inc.*, 820 F.2d 384, 389, 2 USPQ2d 1926, 1929, (Fed. Cir. 1987) (interpretation of a claim may depend on evidentiary material about which there is a factual dispute); *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1269-70, 229 USPQ 805, 811 (Fed. Cir. 1986) (determination of infringement is a question of fact), *cert. denied*, 479 U.S. 1030 (1987).

Morton argues that the district court erred in interpreting Claim 1 and that the court's misinterpretation resulted in errors in the court's conclusions as to both infringement and invalidity. More particularly, Morton claims that the district court misconstrued the claims by restricting the type of evidence Morton could use to show the existence of the claimed compound in Cardinal's mixture to: (1) isolation and (2) nuclear magnetic resonance

(NMR) data showing simultaneous tin-tin coupling and Carbon-13 splitting as the only method to prove the partial connectivity of Claim 1. We disagree.

On review of the record, it is clear that the district court did not construe Claim 1 to require isolation. The court merely required Morton to identify the claimed compounds in Cardinal's mixtures to confirm their existence. The court specifically found that "[n]o amount of testing by equipment or methods available [] can identify, isolate or separate any compound claimed by the '881 or '845 patents." Morton's reliance on *In re Breslow*, 616 F.2d 516, 205 USPQ 221 (CCPA 1980), to show error in the district court's finding is misplaced.

In *Breslow*, the compound in question could not be isolated, but was conceded to exist. The court expressly recognized that the existence of the compound was not in question. *Id.* at 518, 205 USPQ at 224. In the present case, however, the existence of the claimed partial connectivity in the Cardinal mixture is the essence of the dispute, and its existence has never been established. The court specifically acknowledged that under *Breslow*, "it is not imperative that the compounds be isolated in order to be claimed." The court, in determining whether the claims were infringed, used isolation as simply a possible means of such proof.

At trial, one of the ways Morton suggested one could analytically prove the existence of the claimed partial connectivity in Cardinal's mixtures was high-resolution Tin-119 NMR. However, the court observed the conflicting testimony of Morton's expert, Dr. Mesch, and Cardinal's NMR expert, Dr. Ellis, and found Dr. Ellis's more credible. The court found Dr. Mesch's identification of "at least eight peaks in a spectrum of the Cardinal product as possibly having the claimed [partial connectivity]" discredited by Dr. Ellis's conclusions that some of Mesch's identified peaks did not indicate the partial connectivity, but were

caused by other elements present in the sample. The court determined that:

even after Morton and Cardinal have each expended extraordinary sums of money on state of the art testing, these organotin components of the accused Cardinal products cannot be identified as containing the claimed connectivity as specified in the '881 and '845 patents.

It further determined that there is "no objective support for the actual existence of the claimed connectivities." Therefore, the court had no reason to determine whether Cardinal's product contained the specified weight percentages of tin and sulfur claimed in the patents at issue.

Morton also argues that its building block theory shows the existence of the claimed partial connectivity, and that the district court failed to consider it. This theory is essentially that the Cardinal stabilizers contain four moieties—butyltin, sulfide, mercaptoethyltallate, and mercaptoethanol—and that these structures or "building blocks" can combine to form particular compounds, at least some of which contain the claimed connectivity. The compounds containing the claimed connectivity are assumed to be indicated by certain portions of the NMR spectra.

The record shows that the district court considered and rejected Morton's building block theory, concluding that the theory did "not demonstrate the existence of claimed compounds in Cardinal's product which is a complex mixture resulting from Cardinal's process." Even assuming Morton's position that certain molecular fragments can be positively identified in the NMR spectra as being other compounds (non-claimed compounds and prior art stabilizers), our review of the record shows that it is mere speculation to assume that what remains is a claimed compound, *i.e.*, compounds that have the partial connectivity. Cardinal's evidence, based on expert testimony from Drs. Story and Eisch, showed that by performing the re-

actions allegedly taught in the '881 patent, one skilled in the art would not necessarily obtain the compounds containing the claimed partial connectivity. In fact, Dr. Story determined that a number of compounds within the claimed ranges of the tin and sulfur percentages are theoretically possible, but that they did not have the weight ranges of Claim 1. Morton's theory still results in a number of unknown compounds remaining in the spectra. Thus, there is only a possibility of the existence of the claimed compounds in the spectra, and that was not convincing enough to the court to prove infringement.

In summary, to show infringement, Morton was required to prove that every limitation in the claims was met, including the limitation that the partial connectivity existed in Cardinal's stabilizers. The district court found that Morton failed to prove that Cardinal's products contained the claimed partial connectivity. This finding was not clearly erroneous.

Since we have affirmed the district court's holding that the patents at issue have not been infringed, we need not address the question of validity. *Vieau v. Japax, Inc.*, 823 F.2d 1510, 1517, 3 USPQ2d 1094, 1100 (Fed. Cir. 1987). Accordingly, we vacate the holding of invalidity.

Cardinal asserts in its cross-appeal that the district court erred in failing to award attorney fees and in failing to find this case "exceptional" under 35 U.S.C. § 285, because, *inter alia*, Morton effectively retried a case that it earlier lost. *Morton Thiokol, Inc. v. Witco Chemical Corp., et al.*, No. 84-5685 (E.D. La., filed November 28, 1984). Whether a case is exceptional or not is a factual determination subject to appellate review under the clearly erroneous standard. *Reactive Metals and Alloys Corp. v. ESM, Inc.*, 769 F.2d 1578, 1583, 226 USPQ 821, 824 (Fed. Cir. 1985). At the end of the trial, the district court acknowledged that "[t]his case is close"; then, in a lengthy and well-reasoned opinion, the court specifically found that

"[d]espite having some serious reservations as to Morton in fact retrying the *Argus* case, this court does not find that this action constitutes an exceptional case under 35 U.S.C. § 285." We find no clear error in this result.

Based on reasoning similar to its arguments on the exceptional case issue, Cardinal also asks this court to sanction Morton for a frivolous appeal. We decline to do so. Even though we agree with the district court's finding against Morton on the question of infringement, we accept that Morton did have an argument that was new to this case, one that apparently it was not in a position to raise earlier. Thus, based on a review of the record, we determine that Morton had a basis in law and fact for filing suit and bringing this appeal. *Cf. Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1154-55, 220 USPQ 193, 203-04 (Fed. Cir. 1983). Thus, we affirm the district court's denial of attorney fees and decline to impose sanctions for a frivolous appeal. We also see no merit in Cardinal's contention that the district court failed to consider evidence of Morton's inequitable conduct before the Patent and Trademark Office. The record reveals that the district court considered but rejected the evidence.

CONCLUSION

For the foregoing reasons, the district court's judgment is affirmed-in-part and vacated-in-part.

COSTS

Costs to cross-appellants.

AFFIRMED-IN-PART and VACATED-IN-PART

United States Court of Appeals for the Federal Circuit

91-1174,-1175

MORTON INTERNATIONAL, INC.,
Plaintiff -Appellant,
v.

CARDINAL CHEMICAL COMPANY, a partnership,
W.M. QUATTLEBAUM, JR., DOROTHY QUATTLEBAUM,
and W.M. QUATTLEBAUM, III, individuals,
CARDINAL MANUFACTURING CO., and
CARDINAL STABILIZERS, INC.,
Defendants/Cross-Appellants.

LOURIE, *Circuit Judge*, concurring:

I concur with the result of the panel's decision. I write separately to differ with the panel in its decision to review the judgment of noninfringement rather than that of invalidity. The case before us illustrates why, in an appropriate case, we should review an invalidity judgment first, and, if we affirm, then vacate or simply not rule on the infringement issue.

Both parties, including *amici*, ask that we review our "policy" stated in *Vieau v. Japax, Inc.*, 823 F.2d 1510, 1517, 3 USPQ2d 1094 1100 (Fed. Cir. 1987) that, when affirming a district court judgment on noninfringement, we vacate the district court's invalidity conclusion. In several recent cases in which a patent has been found invalid and not infringed, this court has affirmed the holding of noninfringement and vacated the holding of invalidity. *E.g.*, *Wilson Sporting Goods Co. v. David Geoffrey & Assoc.*, 904 F.2d 677, 686, 14 USPQ2d 1942, 1950 (Fed. Cir.), *cert. denied*, ___ U.S. ___, 111 S. Ct. 537 (1990); *Environmental Instruments, Inc. v. Sutron Corp.*, 877 F.2d 1561, 1566,

11 USPQ2d 1132, 1136 (Fed. Cir. 1989); *Sun-Tek Indus., Inc. v. Kennedy Sky Lites, Inc.*, 848 F.2d 179, 183, 6 USPQ2d 2017, 2020 (Fed. Cir. 1988). This practice has been criticized as wasting public and private resources that have been expended in holding a patent invalid. See John Donofrio, *The Disposition of Unreviewable Judgments by the Federal Circuit*, 73 JPTOS 462 (1991); Joseph R. Re & William C. Rooklidge, *Vacating Patent Invalidity Judgments Upon an Appellate Determination of Noninfringement*, 72 JPTOS 780 (1990).

When a patent has been finally adjudicated to be not infringed and further appellate review is not possible, there generally is no longer a case or controversy and the question of validity becomes moot. *Altwater v. Freeman*, 319 U.S. 359, 363, 57 USPQ 285, 288 (1943) ("To hold a patent valid that is not infringed is to decide a hypothetical case.").¹ Conversely, when a patent is similarly adjudicated as invalid, the infringement issue becomes moot. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 330, 65 USPQ 297, 299 (1945). However, because this court is not a court of last resort, a holding of either invalidity or noninfringement by our court does not render the case moot because it is not over. Therefore, when both infringement and validity issues are presented on appeal, we can base our affirmance on both grounds, thereby leaving a complete judgment available for review by the Supreme Court.² We are not compelled to address both or to address

¹ However, when a case arises consisting of a counterclaim for invalidity which is the subject of a cross-appeal or a separate appeal and the controversy between the parties extends beyond the litigated claims or the accused devices, the invalidity issue will not be moot. *Altwater*, 319 U.S. at 363-64, 57 USPQ at 288; *Vieau*, 823 F.2d 1517-21, 3 USPQ2d at 1100-03 (Bennett, J., concurring).

² On a number of occasions, this court has reviewed, in precedential cases, both holdings. E.g., *Mannesmann Demag Corp. v. Engineered Metal Prods. Co.*, 793 F.2d 1279, 1280-81, 230 USPQ 45, 45 (Fed. Cir. 1986); *Shelcore, Inc. v. Durham Indus.*, 745 F.2d 621, 630, 223 USPQ 584, 591 (Fed. Cir. 1984).

them in any order. The power to choose one or the other is not a matter of policy, but of discretion, considering the circumstances of the individual case. If we agree with the district court that no past, present, or future threat of infringement of a patent exists, there may be no need to address the issue of validity. Likewise, if we agree with the district court's determination that a patent is invalid, there may be no need to address issues with respect to infringement.³ Our affirmance on either ground may render a decision as to the other unnecessary. Here, the circumstances illustrate that this court should answer the invalidity question, but need not deal with infringement.

The patents involved in this case have been through two full bench trials and are now before this court for the second time. As the Supreme Court noted in *Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation*, 402 U.S. 313, 328-29, 169 USPQ 513, 519 (1971), there is "an arguable misallocation of resources" in permitting "a litigant more than one full and fair opportunity for judicial resolution of the same issue."

If we vacate the invalidity holding here, as the panel has decided, this patentee will have a third opportunity to defend a patent that twice has been held invalid by a district court. This is not consistent with *Blonder-Tongue* and all parties lose. Morton, who has twice sued under its presumptively-valid patent and lost, still may feel that it can and must prosecute other suits. The presumption of validity has been shaken, but not destroyed. The public

³ Indeed, in a number of precedential cases, this court ruled on invalidity or unenforceability and either did not reach or vacated the non-infringement determination. E.g., *Consolidated Aluminum Corp. v. Fosco Int'l Ltd.*, 910 F.2d 804, 808 n.4, 15 USPQ2d 1481, 1483 n.4 (Fed. Cir. 1990); *Dana Corp. v. IPC Ltd.*, 860 F.2d 415, 417, 8 USPQ2d 1692, 1694 (Fed. Cir. 1988), cert. denied, 490 U.S. 1067 (1989); *A.B. Dick Co. v. Burroughs Corp.*, 798 F.2d 1392, 1393, 230 USPQ 849, 850 (Fed. Cir. 1986).

does not know whether it can practice the invention allegedly covered by a patent twice held invalid by a district court, but partially resurrected by this court. Even Cardinal, apparently a winner here because we have affirmed a finding of noninfringement, does not know whether this patent will obstruct future plans it may have in the field. Moreover, there is a public interest involved in the question of the validity of a patent. *Sinclair*, 325 U.S. at 330, 65 USPQ at 299 ("of the two questions [non-infringement and invalidity], validity has the greater public interest").

In some cases, judicial economy may dictate that we affirm on noninfringement and vacate as to validity, but here, such action would add additional expense to the judicial costs, considering the multiple suits which Morton has brought. Bringing a patent action is an expensive and time-consuming endeavor, as is defending one.

All parties are entitled to a decision affirming or reversing the trial court's holding of invalidity of these patents so that they can plan their future affairs accordingly. We can and should reach that issue.

35 U.S.C. § 112 requires that an invention be described "in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same." At trial, Cardinal had the burden of proving lack of enablement of the '881 and '845 patents by clear and convincing evidence. See 35 U.S.C. § 282. We review the court's determination of lack of enablement as a question of law. *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1268, 229 USPQ 805, 811 (Fed. Cir. 1986), cert. denied, 479 U.S. 1030 (1987).

The specification purports to teach, with over fifty examples, the preparation of the claimed compounds with the required connectivity. However, on review of the record, there is considerable evidence showing that those skilled in the art could not make the claimed compounds using the procedures of the specification, and no evidence

that such compounds even exist. The district court found that

[e]ven with the aid of sophisticated analytical instrumentation and the use of model systems which attempt to provide the compounds claimed in the '881 patent, however, there is no evidence that such compounds exist. The clear and convincing evidence has shown that the examples of the '881 patent do not produce the postulated compounds. Rather, the examples and procedures produce a complex mixture of alkyltin mercaptides and alkyltin sulfides. The evidence established that a number of these are prior art compounds known to be useful as heat stabilizers.

The fifty-odd examples in the patent obviously teach something, but the evidence shows that they did not teach what was allegedly defined in the claims. Because Cardinal's clear and convincing evidence was not rebutted by Morton, such as by showing that the examples do indeed produce the compounds containing the claimed connectivity, I see no error in the district court's determination.

The statute also requires that the "specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112. Since the claims at issue here are not sufficiently precise to permit a potential competitor to determine whether or not he is infringing, I would also agree with the district court's determination that the claims are invalid for failure to satisfy the "definiteness" requirements of § 112, 2nd paragraph.

Given such a determination of invalidity, I would not address that part of the district court's judgment regarding noninfringement.

APPENDIX B

United States Court of Appeals for the Federal Circuit

91-1174, -1175

MORTON INTERNATIONAL, INC.,
Plaintiff-Appellant,
v.

CARDINAL CHEMICAL COMPANY, a partnership,
W.M. QUATTLEBAUM, JR., DOROTHY QUATTLEBAUM,
and W.M. QUATTLEBAUM, III, individuals,
CARDINAL MANUFACTURING CO., and
CARDINAL STABILIZERS, INC.,
Defendants/Cross-Appellants.

Gordon R. Coons, John E. Rosenquist and Jeffrey S. Ward, Leydig, Voit & Mayer, of Chicago, Illinois, and Gerald K. White, Morton International, Inc., of Chicago, Illinois, were on the Petition for Rehearing with Suggestion for Rehearing In Banc for the plaintiff-appellant.

Charles F. Schill and Elizabeth R.P. Bowen, Adduci, Mastriani, Meeks & Schill, of Washington, D.C., and William O. Sweeny, III and Arthur L. Coleman, Nelson, Mullins, Riley & Scarborough, of Columbia, South Carolina, were on the Petition for Rehearing with Suggestion for Rehearing In Banc for defendants/cross-appellants.

I. Fred Koenigsberg, President, American Intellectual Property Law Association, of Arlington, Virginia, and Joseph R. Re and William C. Rooklidge, Knobbe, Martens, Olson & Bear, of Newport Beach, California, and H. Ross Workman, Workman, Nydegger & Jensen, of Salt Lake City, Utah and Nancy J. Linck, Cushman, Carby & Cushman, of Washington, D.C., were on the brief for Amicus Curiae, American Intellectual Property Law Association in support of Suggestions for Rehearing In Banc.

Appealed from: U.S. District Court for the
District of South Carolina

Magistrate Catoe, Jr.

United States Court of Appeals for the Federal Circuit

91-1174, -1175

MORTON INTERNATIONAL, INC.,
Plaintiff-Appellant,

v.

CARDINAL CHEMICAL COMPANY, a partnership,
W.M. QUATTLEBAUM, JR., DOROTHY QUATTLEBAUM,
and W.M. QUATTLEBAUM, III, individuals,
CARDINAL MANUFACTURING CO., and
CARDINAL STABILIZERS, INC.,
Defendants/Cross-Appellants

Appeal Decided: March 20, 1992
Suggestions for Rehearing In Banc Declined: May 7, 1992

June 24, 1992

NIES, *Chief Judge*, dissenting from the orders declining suggestions for rehearing in banc:

Cardinal Chemical Company sought and obtained a declaratory judgment that U.S. Patents 4,062,881 and 4,120,845, owned by Morton International, Inc., were invalid. On appeal, a majority of the panel reasoned that because it affirmed the district court's finding on Morton's infringement claim that Cardinal did not infringe the subject patents, it "need not address the question of validity." Citing *Vieau v. Japax, Inc.*, 823 F.2d 1510, 3 USPQ2d 1094 (Fed. Cir. 1987) as authority, the majority, *sua sponte*, vacated the judgment of invalidity entered on Cardinal's declaratory counterclaim. *Vieau* holds that the issue of validity of a patent, presented in a counterclaim for a

declaratory judgment, becomes "moot," in the sense of no longer presenting a case or controversy, upon this court's finding that: (1) the patent in issue is not infringed and (2) the dispute raised by the counterclaim does not extend beyond the patentee's infringement claim.¹

The *Vieau* analysis stems from two Supreme Court cases, *Electrical Fittings Corp. v. Thomas & Betts Co.*, 307 U.S. 241, 59 S. Ct. 860, 83 L. Ed. 1263 (1939), and *Altwater v. Freeman*, 319 U.S. 359, 63 S. Ct. 1115, 87 L. Ed. 1450 (1943), which addressed certain specific problems respecting validity and infringement rulings by district and circuit courts. Until revisited by the request for *in banc* in this case, I agreed with the interpretation of *Altwater* in our precedent, although I found the *Altwater* decision at best confusing. Upon closer scrutiny, I conclude that part of the *Altwater* analysis has been misinterpreted for reasons which will become evident, and that *Altwater* may mandate the opposite result in this case. At the very least, I am convinced that because *Altwater* does not support the holding of *Vieau*, we should overrule *Vieau* and address the problem anew.

I

MISINTERPRETATION OF SUPREME COURT
PRECEDENT

A review of the Supreme Court precedent must begin with *Electrical Fittings v. Thomas & Betts*, *supra*. In *Elec-*

¹ *Accord Pennwalt v. Durand-Wayland*, 833 F.2d 931, 934; 4 USPQ2d 1737, 1745 (Fed. Cir. 1987) (in banc), *cert. denied*, 485 U.S. 961 (1988) (counterclaim for invalidity declaration dismissed as "moot" and judgment of validity vacated, "there being no indication that Durand-Wayland's cross-appeal on validity extends beyond the litigated claims or the accused devices found to be noninfringing"); *Fonar Corp. v. Johnson & Johnson*, 821 F.2d 627, 634 n.2, 3 USPQ2d 1109, 1114 n.2 (Fed. Cir. 1987) (same); *Advance Transformer v. Levinson*, 837 F.2d 1081, 1084, 5 USPQ2d 1600, 1603 (Fed. Cir. 1988) (judgment of invalidity vacated). It is not clear that the majority made the second *Vieau* finding, but I will assume so.

trical Fittings, the district court, on a bill and answer, held the patent in suit "valid"² but not infringed. The patentee did not appeal. However, the victorious defendant sought to appeal the judgment to the extent it ruled the patent "valid." The circuit court dismissed the appeal on the theory that a winning party could not take an appeal. The Supreme Court reversed, holding that the winner/defendant could appeal to obtain, not a ruling on the merits, but reformation of the decree. The Court appeared concerned that the defendant might otherwise be precluded by the judgment from attacking the patent in another suit.

The next decision, *Altwater v. Freeman*, *supra*, raised the question of whether a counterclaim for invalidity should be treated the same by an appellate court as a defense of invalidity had been treated in *Electrical Fittings*. The Court answered with a resounding "No." Per *Altwater*, a judgment entered by the district court on a declaratory claim for invalidity must be reviewed on the merits by the appellate court so long as a case or controversy exists at that time to support the assertion of the declaratory claim. In *Altwater* the Court found such controversy existed, despite the accused infringer's exculpation from liability on the patentee's claim, because the dispute between the parties "went beyond the single claim and the particular accused devices involved in [the patentee's] suit." *Id.*, 319 U.S. at 364, 63 S. Ct. at 1118, 87 L. Ed. at 1454.

Vieau and other decisions of our court have understood *Altwater* to mean that all declaratory claims for invalidity must be evaluated for the presence of a case or controversy under a standard of whether the counterclaim extended beyond the dispute defined by the patentee's claim of infringement. Thus, we have concluded that, if a dec-

² Under our precedent, the ruling should be "not invalid." *Environmental Designs, Ltd. v. Union Oil Co. of Cal.*, 713 F.2d 693, 699 n.9, 218 USPQ 865, 871 n.9 (Fed. Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984).

laratory claim simply involves the same devices and patent claims involved in the patentee's complaint, upon a finding of no infringement, a counterclaim seeking a declaration of invalidity becomes "moot", in the Constitutional sense of no case or controversy. *See supra*, at n.1.

This understanding of the import of *Altwater* is, in my view, wrong. A significant fact which distinguishes *Altwater*, and which makes its case or controversy analysis no longer germane, is that the *Altwater* claimant for a declaration of invalidity was a *licensee*. By reason of licensee estoppel, the licensee could not attack the validity of the patent except under limited circumstances. *See, e.g., Katzinger Co. v. Chicago Mfg. Co.*, 329 U.S. 394, 67 S. Ct. 416, 91 L. Ed. 374 (1946) (licensee estoppel not applied in light of price-fixing provision of license). *Altwater* is interlaced with principles of licensee estoppel. Twenty-five years had to pass before *Lear v. Atkins*, 395 U.S. 653, 89 S. Ct. 1902, 23 L. Ed.2d 610 (1969), overruled the doctrine of license estoppel. Thus, the discussion of case or controversy must be read in the context of that age—a time when a licensee had to base its declaratory judgment claim on a controversy beyond the patentee's assertion of a right to royalties under the license.

To interpret *Altwater* broadly as requiring an accused infringer who is not a licensee to prove that its counterclaim for invalidity goes beyond the scope of the patentee's complaint in order to establish a *case or controversy* has never been warranted. Such extension of *Altwater* leads to the absurd result that an accused infringer can obtain a declaratory judgment for claims of the patent that were not asserted in the patentee's suit but not for those that were, whereas the patentee's suit in itself shows that the controversy rages as to the asserted patent claims.³ In any event, with respect to even a licensee's need to show a

³ It is arguable that a counterclaim for invalidity of asserted claims is even mandatory under Fed. R. Civ. P. 13(a).

dispute outside the scope of that asserted by the patentee, *Altwater* must be assigned to the graveyard with respect to its case or controversy analysis by reason of *Lear v. Atkins* and possibly *Blonder-Tongue Labs, Inc. v. University of Ill. Found.*, 402 U.S. 313, 28 L. Ed 788, 91 S. Ct. 1434 (1970).⁴

All of the precedent of this court stems from *Altwater* in holding that a counterclaim for a declaration of invalidity is mooted, in the sense of no longer presenting a case or controversy, upon a finding of noninfringement on the patentee's specific charge of infringement, unless the declaratory claimant asserts matters beyond the patentee's complaint. Inasmuch as *Altwater* no longer has any viability respecting the need for a counterclaimant's *separate* and *distinct* case or controversy, the precedent of this court has been based on a false premise. The remaining and only controlling principle of *Altwater* is that an appellate court must decide a counterclaim for a declaration of invalidity where a case or controversy is present and the district court has entered judgment on the counterclaim. I believe that this court should address for itself this "case or controversy" requirement in the context of declaratory counterclaims, unrestricted by the outdated pronouncements of *Altwater*.

II

"MOOTNESS"

Confusion of Principles

Altwater aside, any suit including a counterclaim for a declaration of patent invalidity requires the presence of a

⁴ Before *Blonder-Tongue*, a decree of invalidity was preclusive only between the parties. Even ignoring the licensee estoppel basis of *Altwater*, its "additional claims or devices" requirement may have been influenced by this restricted, and now antiquated, scope of collateral estoppel.

case or controversy at all stages of litigation. If a claim becomes "moot" in this sense at the appellate level, it must be dismissed for lack of jurisdiction. *Vieau* relied on this principle but, in my view, confused concepts of mootness. The *Vieau* opinion concluded there was no case or controversy respecting validity and then said that the court exercised its "discretion" to dismiss the appeal of that issue. 823 F.2d 1520-21, 3 USPQ2d at 1102-03. The majority opinion in this case also indicates, by its statement that "we need not address the question of validity," *Morton Int'l, Inc. v. Cardinal Chem. Co.*, ___ F.2d ___, 22 USPQ2d 1231, 1235 (Fed. Cir. 1992), that it made a *discretionary* decision to dismiss Morton's appeal of the judgment of invalidity. Indeed, the precedent of this court now takes a "one-size-fits-all" approach to treatment of the issue of validity. The court may always dismiss and vacate the judgment below as a matter of discretion once it concludes that the patent claims in issue are not infringed. This result is imposed on the parties regardless of whether the judgment below held the patent valid or invalid, regardless of whether a patentee attempted to have the declaratory counterclaim dismissed, regardless of a dispute over validity between the parties, and regardless of which party appeals the judgment and what that party seeks on appeal. I believe each of these situations requires a separate analysis.⁵

B.

The Meanings of "Mootness"

As an initial matter, it is necessary to clarify what is meant when a court declares an issue is "moot." Indeed,

⁵ *Vieau* is somewhat unusual in that the issue of validity was raised on "cross-appeal" by the *winner* of a declaratory judgment of a patent's invalidity. However, the cross-appeal was taken because of the district court's failure to hold the patent invalid under 35 U.S.C. § 103, as well as under 35 U.S.C. § 112.

the failure to recognize that "moot" has various meanings is a major defect in our precedent. "Mootness" can rise to the level of a bar to the court's exercise of jurisdiction or descend to the level of prudential convenience and economic use of judicial resources.

"Mootness" is jurisdictional when the dispute between the parties, or at least an issue in the case, no longer exists. That is, the issue no longer presents an actual case or controversy. If an issue is moot in this sense, a court has no discretion but *must* dismiss for lack of jurisdiction. *Powell v. McCormack*, 395 U.S. 486, 496 n.7, 89 S. Ct. 1944, 1950 n.7, 23 L. Ed.2d 491, 502 n.7 (1969) (court lacks jurisdiction to consider the merits of a moot case); *Brownlow v. Schwartz*, 261 U.S. 216, 43 S. Ct. 263, 67 L. Ed. 620, (1923) (where mandamus action for issue of building permit is mooted by the permit's issue pending appeal, appellate court must remand with directions to dismiss); *Smith Intern., Inc. v. Hughes Tool Co.*, 839 F.2d 663, 5 USPQ2d 1686 (Fed. Cir. 1988) (settlement prior to appellate court decision moots case); *Fundicao Tupy S.A. v. United States*, 841 F.2d 1101 (Fed. Cir. 1988) (appeal of denial of preliminary injunction mooted by district court's intervening judgment).

An issue is also said to be "mooted" when a court, having decided one dispositive issue, chooses not to address another equally dispositive issue. In this sense, mootness means only that a decision on another issue would have no practical significance. This type of mootness results from prudential, not jurisdictional, considerations. See *United States v. Leon*, 468 U.S. 897, 924-25, 104 S. Ct. 3405, 3421-22, 82 L. Ed.2d 677, 699-700 (1984) (Fourth Amendment issue may be decided as a matter of discretion before addressing "good faith exception" for warrantless searches.); *Fischer & Porter v. United States Int'l Trade Comm'n*, 831 F.2d 1574, 4 USPQ2d 1700 (1987) (patent issues mooted by affirmance of no injury in proceeding under 19 U.S.C. § 1337). See also *Airline Pilots Ass'n*,

Intern. v. UAL Corp., 897 F.2d 1394, 1397 (7th Cir. 1990) (distinguishing between a court's resolution of an alternative, unnecessary issue and Article III mootness); 13A Wright, Miller and Cooper, *Federal Procedure: Jurisdiction* § 3533 (1984).

In a patent suit, an accused infringer may raise as defenses noninfringement and various grounds for holding the patent claims invalid, as well as various grounds for holding that patent unenforceable. A decision on any one of the grounds in favor of the accused infringer defeats the patentee's claim for damages or injunctive relief. Although not jurisdictionally moot, other equally dispositive issues are deemed "moot" in the sense that a ruling is not necessary to decision. Thus, a decision of noninfringement by this court "moots," i.e., may make it unnecessary to decide, the various other defenses. *Unette Corp. v. Unit Pack Co., Inc.*, 785 F.2d 1026, 1029, 228 USPQ 933, 935 (Fed. Cir. 1986). In this sense, a decision of invalidity "moots" the defense of noninfringement. *United Carbon Co. v. Binney Co.*, 317 U.S. 228, 237, 63 S. Ct. 165, 170, 87 L. Ed. 232, 238 (1942) ("We are of the opinion that the claims in litigation are bad for indefiniteness, and have no occasion to consider questions of novelty, invention, and infringement.") Which defense the court chooses to address is a matter of discretion, although the Supreme Court has indicated that the more important public policy issue in patent cases is validity. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 330, 65 S. Ct. 1143, 1145, 89 L. Ed. 1644, 1646 (1945).⁶ On the other hand, an appellate court, like a district court, may choose to decide all issues. As Judge Lourie explains, this court is not a court of last resort. Like the district court, it may resolve the issue of validity even as a *defense* and even after finding no infringement.

⁶ After *Blonder-Tongue*, the "public policy" import of validity rulings (especially those finding patents invalid) has grown substantially.

Indeed, the Supreme Court in *Sinclair* would not have directed lower courts to resolve the issue of validity after finding no infringement if the latter finding *jurisdictionally* mooted the issue of validity.⁷

Thus, the distinction between jurisdictional mootness and prudential mootness is important respecting what action can or must be taken by the lower courts. Jurisdictional mootness *mandates* that the court make no resolution on the issue. There is no discretion either to decide or not to decide. Only prudential mootness involves the exercise of discretion. Compare *United States v. Leon*, *supra*, with *Brownlow v. Schwartz*, *supra*.

III

DECLARATORY CLAIMS

A.

Jurisdictional Mootness

A finding of noninfringement does not moot a declaratory claim for invalidity *jurisdictionally* regardless of the scope of the patentee's infringement suit.

If Cardinal's action for a declaration of invalidity had been the sole proceeding in the case, Morton could not have inserted as *an affirmative defense* that Cardinal did not infringe the patent claims. A declaratory action for a judgment of invalidity is based on a fear of suit under the

⁷ The statement made in *Altwater* concerning its decision in *Electrical Fittings* that, "To hold a patent valid if it is not infringed is to decide a hypothetical case" is not in conflict. It is the reason for the Court's approval of vacatur at the behest of the defendant. The defendant was not entitled to have that issue resolved *on the merits* when presented only as an affirmative defense once exculpated from liability on the patentee's charge, but should not be precluded by the judgment from litigating the matter in a subsequent suit. Similarly, in my view, a patentee may be able to obtain vacatur of a holding of invalidity where there is only a patentee's claim of infringement that is defeated by a finding of noninfringement that a patentee chooses not to appeal.

patent. Such fear is not dependent on being held *liable* for infringement. "A declaratory plaintiff has sufficient interest [where] . . . there is a reasonable threat that the patentee or licensor will bring an infringement suit against the alleged infringer. Smith, *Foreclosure of Licensee Validity Challenge with Procedural Barriers: Federal Jurisdiction*, 61 JPOS 690, 697 (1979)." *C.R. Bard, Inc. v. Schwartz*, 716 F.2d 874, 879, 219 USPQ2d 197, 202 (Fed. Cir. 1983); cf. *Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp.*, 382 U.S. 172, 176, 86 S. Ct. 347, 350, 15 L. Ed.2d 247, 251 (1965). Once the patentee creates a legitimate fear in an adversary that the patent will be asserted against it, nothing short of the patentee's unconditional guarantee not to do so under any circumstances ordinarily will remove that apprehension and thereby jurisdictionally moot the claim for declaratory relief. In *Bard*, even the affidavit of the patentee that it had no intention of suing the declaratory claimant fell short of mooting the asserted declaratory claim. *Bard*, 716 F.2d at 881, 219 USPQ at 204. Here, Morton has made no similar representation to Cardinal. Indeed, its suit against Cardinal confirmed the presence of the necessary controversy on Cardinal's counterclaim respecting at least the asserted claims. Morton's appeal of the invalidity judgment confirms again the threat of the patent.⁸ And Cardinal has not *waived* its declaratory claim against the asserted claims, as some vindicated defendants have on appeal. I can see no possible basis for holding Cardinal's declaratory claim *jurisdictionally* moot.

⁸ As stated in *Jervis & Webb Co. v. Southern Sys., Inc.*, 742 F.2d 1388, 1399, 222 USPQ 943, 949 (Fed. Cir. 1984), there must be a case or controversy respecting each claim sought to be declared invalid. This requirement is not an issue in this case. There is a case or controversy as to the entirety of the patent because of the nature of the asserted grounds for invalidity.

B.

Prudential Mootness

In a few circumstances, a declaratory invalidity claim may be prudentially mooted by the appellate court judgment on another issue. However, a finding of noninfringement is not such a circumstance. As indicated, noninfringement is not a permissible affirmative defense by the patentee and, thus, cannot be an alternative ground *for judgment* on a declaratory claim for invalidity as it is for a judgment on the patentee's claim. *Altwater, supra*.

An example of prudential mootness of the declaratory claim on appeal appears in *A.B. Dick Co. v. Burroughs Corp.*, 798 F.2d 1392, 1400, 230 USPQ2d 849, 855-56 (Fed. Cir. 1986). There, this court upheld the accused infringer's defense of inequitable conduct which rendered the patent entirely unenforceable. Thus, a judgment of invalidity would have added nothing to the relief already afforded the counterclaimant on the patentee's claim.

C.

Redundancy

In my view the issues which should have been addressed *in banc*, after eliminating the concept of a declaratory judgment being jurisdictionally "mooted" as held in *Vieau*, concern the discretionary power of a court to refuse to accept an accused infringer's declaratory judgment suit or counterclaim which is merely *redundant* to a claim being litigated by its adversary. As stated by Justice Frankfurter in his dissent in *Altwater*,

We are all agreed that while a district court may have jurisdiction of a suit or claim under the Federal Declaratory Judgments Act, 28 U.S.C. § 400, it is under no compulsion to exercise such jurisdiction. If another proceeding is pending in

which the claim in controversy may be satisfactorily adjudicated, a declaratory judgment is not a mandatory remedy.

316 U.S. at 366, 63 S. Ct. at 1119, 87 L. Ed. at 1455. Clearly a district court need not accept a redundant declaratory counterclaim (or even a separate suit), and may reserve making a decision on whether declaratory relief is appropriate until after decision on the plaintiff's claim. Borchard, *Declaratory Judgments* 814 (1941). The standard is whether the declaratory relief would be appropriate as cumulative or alternative relief. The provisions in Fed. R. Civ. P. 57 codify the view that:

the declaratory judgment should not be considered an extraordinary remedy or an unusual or a strange form of action; it should be considered a simple, ordinary auxiliary remedy-no more strange than injunction, specific performance, or damages-to be asked for and given whenever it will remove uncertainty in the rights of a litigant or settle a controversy existing or incipient.

Clark, *Code Pleading*, § 53 at 336 (1947). See also 10A Wright, Miller and Kane, *Federal Practice and Procedure* § 2758 (1983).

In this case the district court made a judgment, on the patentee's claim, of no liability by reason of noninfringement. On the counterclaim the court made judgment of invalidity. The judgments are not redundant and the factual inquiries to resolve each claim were distinctly different. Cf. *Partmar Corp. v. Paramount Pictures Theatres Corp.*, 347 U.S. 89, 103, 74 S. Ct. 414, 422, 98 L. Ed. 532, 543 (1954). From the distinction drawn in the judgments, it appears that the district court concluded that the judgment on the counterclaim was a remedy necessary to settle the rights of the parties more completely. It could also be concluded that the public policy stated in *Blonder-Tongue* made a judgment on the validity counterclaim the

more desirable judgment. The judgment of invalidity was in no sense merely "advisory".

Different views are espoused on whether the scope of appellate review of a district court's decision to accept or dismiss a declaratory claim is highly restricted (abuse of discretion) or plenary (*de novo*). See Friendly, *Indiscretion About Discretion*, 31 Emory L.J. 747, 779 (1982) (noting decisions both ways and advocating *de novo* review of district court decisions).

We would have a different case if Morton had sought dismissal of the declaratory judgment claim as merely redundant of the claim of its complaint either at the district court level or in this court. This issue, however, has not been raised. *Provident Bank v. Patterson*, 390 U.S. 102, 126, 88 S. Ct. 733, 746-47, 19 L. Ed.2d 936, 954 (1968). Thus, no findings have been made on this issue such as would be necessary for a dismissal on this ground. Cf. *Brillhart v. Excess Ins. Co. of America*, 316 U.S. 491, 497, 62 S. Ct. 1173, 1177, 86 L. Ed. 1620, 1626 (1942).

In this appeal, the questions are whether Morton is entitled to review of the declaratory judgment of invalidity on the merits and whether Cardinal can be deprived of its judgment without such review. Under *Altwater*, the Supreme Court appears to have mandated that an appellate court must review a declaratory judgment which comes to us in the posture of this case. But this is not entirely clear. The questions which I have raised here have not been addressed in this case or in any authoritative precedent I have found, and in my view need to be explored.

IV

CONCLUSION

Morton objects to this court's action of returning its patents into a state of limbo, having twice had them declared invalid by district courts, and twice having those

judgments vacated by this court without any ruling on the merits. Other litigation on the patents is in the wings. Cardinal urges it is entitled to the judgment it obtained on a valid counterclaim at great expense and effort.⁹ I conclude that the precedent of this court supporting its action of vacating the invalidity judgment in this case is in error, and I therefore dissent from the denial of *in banc* rehearing in this appeal. I have not written to offer a definite solution to this problem.¹⁰ I write because I cannot find justification for our *Vieau* decision either legally or as a "policy". Further, this court has repeatedly denied *in banc* consideration to alter our "mootness" precedent. The question of how a judgment of invalidity on a declaratory claim should be treated after a finding of no infringement is too important in my view to let pass again. The parties can now look only to the Supreme Court for correction.

⁹ Nor should we be unmindful of the expense and effort of the district court. Judge Avern Cohn of the Eastern District of Michigan (the *Vieau* trial judge) stated, in a panel discussion at our most recent Judicial Conference:

I took six months to write a JNOV, found the patent invalid and not infringed and was very proud of my work product. And when I read that court of appeals opinion and found that my finding of invalidity had been vacated, there was no case or controversy, I was in a state of shock for ten minutes.

Cohn, Remarks at the Patent Breakout Session of the Tenth Annual Judicial Conference of the United States Court of Appeals for the Federal Circuit 65 (April 30, 1992).

¹⁰ Others have done so. See, e.g., Rooklidge and Re, *Vacating Patent Invalidity Judgments Upon an Appellate Determination of Noninfringement*, 72 J. Pat. & Trademark Off. Soc'y 780 (1990).

APPENDIX C
IN THE DISTRICT COURT OF THE UNITED STATES
FOR THE DISTRICT OF SOUTH CAROLINA
GREENVILLE DIVISION

Civil Action No. 6:83-889-OK

Morton International, Inc.,

Plaintiff,

vs.

Cardinal Chemical Company, a Partnership, W.J.
 Quattlebaum, Jr.; Dorothy Quattlebaum; and W. M.
 Quattlebaum, III, individuals; Cardinal Manufacturing;
 and Cardinal Stabilizers,
 Defendants.

FILED
JAN 10 1991
ANN A. BIRCH, CLERK
U.S. DISTRICT COURT

ORDER*

The plaintiff, Morton International, Inc., filed a complaint in the United States District Court for the District of South Carolina, on April 12, 1983, alleging infringement of its U. S. Patent Nos. 4,062,881 and 4,120,845 (hereinafter the '881 and '845 patents) by Cardinal Chemical Company, et al. The plaintiff subsequently filed suit on

* This is the public version of the order. The use of closed brackets indicates redacted confidential information pursuant to a protective order of the court.

those same patents in the U. S. District Court for the Eastern District of Louisiana, *Morton Thiokol, Inc. v. Witco Chemical and Argus Chemical Corp.*, No. 84-5685, E.D.La., filed November 28, 1984, and in the U.S. District Court for the District of Delaware, *Morton International, Inc. v. Atochem (M&T) Chemicals, Inc.*, No. 87-60-CMW, D.Del., filed February 9, 1987).

On July 28, 1988, the U. S. District Court for the Eastern District of Louisiana entered a judgment finding the '881 and '845 patents invalid, void, unenforceable and not infringed, and dismissed the plaintiff's claim for patent infringement with prejudice and at its cost. On April 3, 1989, the Court of Appeals for the Federal Circuit affirmed the judgment that the '881 and '845 patents were not infringed.¹

On May 2, 1990, the defendants in this case moved for summary judgment on the following grounds: (1) that the plaintiff should be collaterally estopped from suing the defendants on the '881 and '845 patents which were held invalid and not infringed after a full and fair opportunity to litigate the patents in the District Court in the Eastern District of Louisiana;² and (2) that pursuant to Rule 56 of the Federal Rules of Civil Procedure and based on the evidence before the court, the patents did not comply with the requirements of 35 USC §112 and were therefore invalid. The defendants' motion for summary judgment was denied on June 20, 1990, after oral argument.

This case was referred to this court for trial by order of the Honorable Matthew J. Perry, U. S. District Judge,

¹ On April 17, 1989, the plaintiff petitioned the Court of Appeals for the Federal Circuit for a rehearing, which was denied on May 3, 1989.

² The defendants maintained that, although the Court of Appeals for the Federal Circuit affirmed the lower court decision of noninfringement and vacated validity, the Federal Circuit decision as written demonstrated the invalidity of the patents.

filed May 4, 1988. A nonjury trial was held from September 10 through September 14, 1990.

To prepare the court for the trial of this very difficult case, the parties submitted all of the depositions, a copy of the *Argus* trial transcript, and an educational package several months in advance. This order is being addressed promptly because the court does not want time to erode his memory of the testimony and terminology.

After reviewing the entire record from this case, as well as the evidence stipulated into the record from *Morton Thiokol, Inc. v. Argus Chemical Corp.*, Civil Action No. 84-5685 (E.D.La. 1988) ("Argus"), this court concludes that the plaintiff has failed to prove by a preponderance of the evidence any infringement by the defendant, and further finds by clear and convincing evidence that the patents are invalid.

To the extent that any findings of fact are deemed to be conclusions of law, they should be so considered, and to the extent that any conclusions of law are deemed to be findings of fact, they too should be so considered.

I. BACKGROUND

The plaintiff, Morton International, Inc. is an Indiana corporation having its principal place of business at 110 North Wacker Drive, Chicago, Illinois. Industrial Chemicals and Additives of the Specialty Chemical Group of Morton manufactures and sells heat stabilizers, including stabilizers such as ADVASTAB TM-692 and ADVASTAB TM-592, which are made under the Kugele '881 and '845 patents. Industrial Chemicals and Additives itself has evolved first from Carlisle Chemical Company to Cincinnati Milacron Chemicals, Inc., then to Carstab Corporation, then to the Carstab Products Group of the Ventron Division of Morton Thiokol, Inc., and finally to Industrial Chemicals and Additives of Morton International's Specialty Chemi-

cals Group. For simplicity, reference herein to the plaintiff and its predecessors will be as "Morton."

There are six defendants in this case. They are three companies (Cardinal Chemical Company, Cardinal Manufacturing, Inc. and Cardinal Stabilizers, Inc.) and three individuals (W. M. Quattlebaum, Jr., Dorothy Quattlebaum, and W. M. Quattlebaum, III). Cardinal Chemical is a partnership, and both Cardinal Manufacturing, Inc. and Cardinal Stabilizers, Inc. are South Carolina corporations. Some seven years ago, when this suit was filed, only Cardinal Chemical Company and W. W. Quattlebaum, Jr. were named as defendants. For simplicity, reference herein to the defendants will be as "Cardinal" or "the Cardinal defendants."

United States Letters Patent No. 4,062,881 issued on December 13, 1977, on application Serial No. 492,969 filed July 26, 1974. The '881 patent was issued to Cincinnati Milacron Chemicals, Inc., as assignee of Thomas G. Kugele, the inventor of the claimed subject matter. It is presently assigned to Morton.

The '881 patent claims are directed to organotin mercaptoalcohol carboxylic acid ester sulfides which are useful as heat stabilizers. A shorthand notation for these compounds is alkyltin mercaptoalcohol ester sulfides. These stabilizers are conveniently referred to by Dr. Kugele and others at Morton as "reverse ester sulfides."

United States Letters Patent No. 4,120,845 issued on October 17, 1978, on application Serial No. 826,917 filed August 22, 1977, that application being a divisional of the '969 application. The '845 patent was issued to Cincinnati Milacron Chemicals, Inc., as assignee of Thomas G. Kugele, the inventor of the claimed subject matter. It is presently assigned to Morton.

The '845 patent claims a composition including a polymer, such as a polyvinyl chloride polymer, and at least

one of the "reverse ester sulfides" claimed in the '881 patent.

Polyvinyl chloride (PVC) is a polymer used in the manufacture of various products which requires the use of an additive to protect the PVC from decomposition. The additives are known as heat stabilizers. These heat stabilizers also prevent other degradations such as discoloration and loss of strength. Organotin compounds are one type of heat stabilizer for PVC. Organotin compounds are also used in the manufacture of other products such as vinyl siding.

The early development of these organotin stabilizers began in the early 1950s when it was discovered that the introduction of organotin mercaptide stabilizer products wherein tin was bonded directly to a sulfur atom resulted in a stabilizer with superior performance in certain applications over stabilizers then existing. This discovery resulted in a great deal of work in the stabilizer industry directed toward incorporating derivatives of available mercaptan starting materials to tin. Organotin stabilizers containing mercaptoethanol carboxylic acid esters were particularly effective but had a strong unpleasant odor. Organotin stabilizers including thioglycolic acid derivatives, instead of mercaptoethanol derivatives, were developed which were effective and did not have as foul an odor as the stabilizers using mercaptoethanol derivatives. The industry was also working toward the development of organotin stabilizers containing inorganic sulfur substituents. The industry then developed blends using different organotin stabilizers as admixtures.

II. SCOPE OF THE KUGELE PATENTS

Only Claim 1 of the Kugele '881 and '845 patents is at issue in this litigation. The Kugele '881 patent is directed to compounds which are represented as being useful as

stabilizers for polyvinyl chloride and other halogen containing polymers. Claim 1 of the '881 patent states:

A monoorganotin or diorganotin mercaptoalkyl ester of a carboxylic acid or mercapto hydroxyalkyl ester of a carboxylic acid mono or poly sulfide useful as a stabilizer for improving the resistance to deterioration of vinyl chloride polymers when heated at 350 [degrees] F, containing at least one tin atom having one to two hydrocarbonyl groups having from 1 to 20 carbon atoms and selected from the group consisting of alkyl, aryl, cycloalkyl, aralkyl and alkenyl and linked to the tin through carbon, at least one mercaptoalkyl ester of a carboxylic acid group linked to tin through the sulfur of mercaptoalkyl group and at least one mono or poly sulfide sulfur group bonded exclusively to tin, the organotin compound having an amount of tin within the range from 10 to 42% by weight and an amount of sulfur within the range from 8 to 42% by weight.

This claim covers organotin compounds which are useful as stabilizers that have particular chemical structural elements. The two elements involved are: (1) a partial arrangement of atoms, referred to as "molecular connectivity,"³ wherein a tin atom is bonded to a sulfur atom, the sulfur atom then bonded to a second tin atom, and the second tin atom bonded to a reverse ester mercaptide: Sn-S-Sn-SR ; and (2) "the organotin compound [has] an amount of tin within the range of 10-42% by weight and an amount of sulfur within the range from 8-42% by weight." *Morton Thiokol, Inc. v. Argus Chemical Corp.*, 11 U.S.P.Q.2d 1152, 1153 (Fed. Cir. 1989). The District Court for the Eastern District of Louisiana construed the

³ Where the term "connectivity" is used, this court means the "partial" connectivity as specified in the claims of the patents in issue.

claims in this manner and that construction was adopted by the Federal Circuit. *Id.*

III. FINDINGS OF FACT

Based on the entire record, including the pleadings, the exhibits, and the testimony at trial, this court makes the following findings of fact:

As to Infringement

1. Cardinal has made and sold commercially certain organotin heat stabilizer products, including products known as CC7710, CC7711, CC7711A, CC7712, CC7712M in the United States. These comprise the products accused of infringing the '881 and '845 patents.

2. Morton has asserted that the manufacture and sale of Cardinal's accused products constitutes direct infringement of Claim 1 of the '881 patent and inducement to infringe Claim 1 of the '845 patent.

3. Claim 1 of the '881 patent reads as follows:

A monoorganotin or diorganotin mercaptoalkyl ester of a carboxylic acid or mercapto hydroxy-alkyl ester of a carboxylic acid mono or poly sulfide useful as a stabilizer for improving the resistance to deterioration of vinyl chloride polymers when heated at 350 [degrees] F, containing at least one tin atom having one or two hydrocarbyl groups having from 1 to 20 carbon atoms and selected from the group consisting of alkyl, aryl, cycloalkyl, aralkyl and alkenyl and linked to the tin through the sulfur of the mercaptoalkyl group and at least one mono or poly sulfide sulfur group bonded exclusively to tin, the organotin compound having an amount of tin within the range from 10 to 42% by weight and an amount of sulfur within the range from 8 to 42% by weight.

4. []

5. Claim 1 of the '881 patent requires a tin-sulfur tin connectivity which is also connected to a mercapto ethyl ester with limitations on the percentage of tin and sulfur for those structures.

6. The plaintiff asserts that Claim 1 of the '881 patent is a representative claim and agrees that infringement will stand or fall on the basis of this claim.

7. The plaintiff asserts that Claim 1 of the '845 patent is a representative claim and agrees that infringement will stand or fall on the basis of that claim.

8. Morton has failed to establish, by a preponderance of the evidence, that any of the accused Cardinal products (CC7710, CC7711, CC7711A, CC7712, CC7712M) include a compound within the scope of Claim 1 of the '881 patent, nor has Morton established by a preponderance of the evidence that the manufacture or sale of these accused products or any other products constitutes an inducement to infringe Claim 1 of the '845 patent.

9. After Cardinal was accused of infringement, Cardinal hired Dr. Paul R. Story to analyze both Cardinal and Carstab products. Dr. Story first tried to determine the structure of the compound involved by separating the pure compounds from what were obviously mixtures. Cardinal purchased a state of the art HPLC instrument to separate the mixtures so that a structural determination could be made.

10. The Cardinal products at issue are made by a process which differs substantially from the procedures and examples of the '881 patent. []

11. Cardinal products are made with different starting materials and a different process.

12. []

13. There was no evidence introduced during the *Cardinal* or *Argus* trials which could identify the specific compound that fits the criteria of Claim 1 of the '881 patent.

14. No unambiguous data was introduced that would satisfy even a reasonable chemical standard of proof that the compounds exist in either Morton or Cardinal products.

15. Cardinal conducted extensive HPLC testing in an effort to separate the mixtures for both Cardinal products and for Morton products. In addition, Cardinal submitted samples for NMR (nuclear magnetic resonance) testing using a 300 mhz NMR spectra in an effort to characterize the nature of the mixtures. In Cardinal's efforts, it ran both tin and proton NMR. From all of the experiments run by Cardinal, there was no unambiguous data gathered that pointed to the presence of the compounds claimed in the '881 patent.

16. As a result of two years of work, Dr. Story was able to characterize parts of the Cardinal products. [] Dr. Story's testimony is entitled to great weight.

17. Dr. Story used primarily NMR because it told him a lot more about the structure than tin 119 NMR. In addition, there is a much greater library of information to build upon regarding chemical shifts and coupling constants for proton NMR.

18. Cardinal hired NMR expert Paul Ellis to interpret Morton's alleged proof of infringement and met with Morton to discuss the matter. After the meeting, Cardinal determined that neither chemical logic nor the NMR tests demonstrated any infringement by Cardinal.

19. Cardinal analyzed preparations made according to the '881 patent and was unable to locate any structures which met the descriptions in the '881 patent.

20. Cardinal ran NMR spectra on its own and Kugele mixtures. From the NMR spectra of Cardinal's products,

Dr. Story could not draw any conclusions because of the complexity of the spectra.

21. In his testing, Dr. Story also analyzed spectra of Cardinal's actual materials that were made for their commercial products. Dr. Story found that the NMR spectra of Cardinal's commercial products and the Morton mixture were different. The methyltin tris mercaptoethyl oleate which shows up boldly in the Morton mixture is absent from the spectra of the Cardinal products. Dr. Story was certain that there is no detectable tris (the butyltin analogue) in Cardinal's products because of the absence of any peak in the NMR spectra.

22. The flagship for the Morton product is the appearance of the methyltin tris mercaptoethyl oleate ("tris"). After extensive tests, Cardinal could not identify tris in Cardinal's commercial products. Accordingly, the absence of butyltin tris is an indication that there are no '881 products present.

23. From the HPLC tests that Dr. Story performed, [] but he could not isolate the rest of the mixture because it was too complex.

24. Dr. Story also ran HPLC tests on model systems, but the only separable components from Morton's product were the tris and the BTSA.

25. Cardinal demonstrated by clear and convincing evidence during trial that NMR does not show the alleged connectivity in any of the Cardinal or Morton compounds analyzed.

26. []

27. []

28. []

29. []

30. []

31. []

32. [] During the *Cardinal* trial, Dr. Story demonstrated that he could theorize compounds outside of the weight ranges for tin and sulfur. Through his testimony, Dr. Story established that it is possible to draw structures with the hypothetical connectivity of the Kugele patent which have tin outside the range of the '881 patent. However, like the proof of the Kugele compounds, Dr. Story was unable to characterize those materials because he could not isolate any for testing; thus, he concluded their existence is mere speculation.

33. []

34. To be covered by the Kugele claims, the ranges of tin and sulfur must be met. Without identifying all of the atoms in a compound asserted to be covered by Claim 1, it is impossible to prove that the claimed weight ranges for tin and sulfur are met with respect to a particular compound.

35. []

36. Cardinal cannot be held to infringe patents which require the existence of specific limitations which are impossible to detect.

37. []

38. []

39. []

40. []

41. []

42. []

43. []

44. []

45. []

46. Even with state of the art instrumentation, it is impossible to isolate a single compound to determine the connectivity of atoms as claimed in the Kugele patents. []

47. []

48. Compounds can be predicted with the connectivity described by the '881 patent that have tin and sulfur ranges outside of those claimed by the patent. The evidence that compounds exist within the ranges is neutral, and thus inconclusive. The compounds which result from Cardinal's process chemistry are just as likely to consist of such compounds as those assumed by Morton, but it is all speculation.

49. There is no analytical evidence that the weight ranges or the connectivity described in the '881 patent in fact exist.

50. There is no way of testing, by NMR or any other analysis, to prove whether compounds in Cardinal's products are the compounds which are claimed by Morton or are compounds of the nature which Cardinal determined analytically. For this same reason, the Federal Circuit found that to calculate the percent tin and percent sulfur ranges contained in the compounds was merely an intellectual exercise resulting in calculations which would fall both within and outside of the claimed ranges.

51. []

52. Morton and Cardinal can identify certain compounds from the Cardinal products which are known prior art organotin stabilizers. The remaining compounds of the mixtures are, however, not isolable and cannot be identified by any of the testing sufficient to show any compound falling within the claims of the '881 patent. Thus, there is no reliable evidence which proves that the claimed compounds exist, nor is there reliable evidence to satisfy a preponderance standard that any of the claimed compounds are contained in Cardinal's accused products.

53. []

54. The partial connectivity described in claim 1 of the '881 patent contains what has been called a tin-sulfur-tin bridge, and this fragment has a unique fingerprint in tin-119 NMR spectra of the stabilizers at issue here.

55. That fingerprint appears in a tin-119 spectrum as a peak flanked by two smaller peaks, which are known as satellites. The height of these satellites is approximately 3-1/2% of the height of the main tin peak they are associated with.

56. Due to the small size of satellites, it is hard to observe tin-tin coupling except in simple spectra.

57. []

58. []

59. []

60. []

61. []

62. []

63. []

64. []

65. []

66. []

67. []

68. []

69. []

70. []

71. The doctrine of equivalents requires proof that the accused products do substantially the same thing, in substantially the same way, to achieve substantially the same result. Morton failed to demonstrate at trial the characteristics of its claimed compounds in order to meet the "substantially the same" requirements of the doctrine of equivalents. Such a showing is impossible []

72. []

73. []

74. As was demonstrated by Timothy C. Ross, the intermediates in Cardinal's products, which are known compounds, showed equal or superior stabilization performance to both TM-694 and the product of Example 30. Mr. Ross compared the stabilizing effect of TM-694 to the stabilizing effects of CC7712 and got better results from CC7712 []

75. These tests demonstrate that Cardinal intermediates have been proven to have stabilizing effects. []

76. The accused Cardinal products do not contain any compound covered by Claim 1 of the '881 patent. Therefore, one using the accused Cardinal products as stabilizers for PVC does not infringe the '845 patent.

77. As there is no infringement of the '881 patent, there can be no infringement of the '845 patent.

As to Validity

78. The Kugele '881 and '845 patents are invalid under 35 U.S.C. §112.

79. There is no evidence that the '881 patent teaches one how to make the compounds as claimed in the '881 patent.

80. The '881 and '845 patent specifications do not teach one skilled in the art how to make and use the compounds claimed therein without undue experimentation.

81. The specifications of the '881 and '845 patents are virtually identical.

82. All the examples of the '881 and '845 patents are written as working examples.

83. []

84. An index of refraction can be determined only by physical and experimental measurement and cannot be calculated simply mathematically.

85. The indices of refraction given in the examples of the '881 and '845 patents appear to one skilled in the art to be very precise, being given to the fourth decimal place.

86. One skilled in the art in 1974 would believe from the indices of refraction given in the examples of the '881 and '845 patents that those examples had actually been performed and that the indices of refraction had actually been physically experimentally determined. []

87. The boiling points of products asserted to be made by examples of the '881 and '845 patents are given in the examples. One skilled in the art in 1974 would believe from the boiling points given in the examples of the '881 and '845 patents that those examples had actually been performed and the boiling points actually experimentally determined.

88. []

89. [] The "yield" of reaction products is given for almost all of the examples of the '881 and '845 patents and would be understood by one skilled in the art in 1974 to have been determined experimentally, rather than simply by mathematical calculation.

90. []

91. The '881 examples are written as work which was actually performed, the results of specific experiments being provided. The indications that the experiments would have been actually conducted are the melting point, the refractive index, the language that indicates that certain steps were repeated, the specification of yield.

92. []

93. The tin and sulfur limitations of Claim 1 tell the public what is claimed in the Kugele patents. []

94. When organotin patents provide specific yield and percent calculations, including refractive indices, one skilled

in the art would conclude that the experiments were performed. []

95. The examples of the '881 patent would not have taught one skilled in the art in 1974 how to make and use the claimed invention. []

96. []

97. []

98. []

99. []

100. []

101. []

102. []

103. []

104. []

105. []

106. []

107. []

108. []

109. []

110. []

111. []

112. []

113. []

114. []

115. No amount of testing by equipment and methods available in 1974 could identify, isolate, or separate any compound claimed by the '881 or '845 patents.

116. No amount of testing by equipment or methods available after 1974 can identify, isolate or separate any compound claimed by the '881 or '845 patents.

117. The '881 patent is invalid pursuant to 35 U.S.C. §112 because it fails to teach one skilled in the art in 1974 or today how to make and use the claimed compounds.

118. The interchangeability of mercapto alcohol esters for mercapto acid esters in organotin stabilizers was known to one skilled in the art in 1974.

119. The structural language in the claims of the '881 patent is too vague to satisfy the definiteness requirement of §112.

120. One skilled in the art in 1974 could not determine if a compound claimed by the '881 patent is made by following the teachings of the '881 patent. Even today, no amount of effort can extract products with the claimed connectivity and weight percentages of Claim 1 from the reaction products which result from the Kugele chemistry.

121. When the patent was applied for in 1974 and even after the patent issued in 1978, there was not one single test available to determine the claimed connectivity.

122. One skilled in the art in 1974 could not determine if a compound having the partial connectivities claimed by the '881 patent is made by following the teachings of '881.

123. []

124. One skilled in the art in 1974 could not determine if a compound having the percent weight of tin claimed by the '881 patent is made by following the teachings of '881.

125. No amount of experimentation, including undue experimentation, could show one skilled in the art in 1974 that a compound claimed by the '881 and '845 patents can be made.

126. No amount of experimentation could show one skilled in the art in 1974 that a compound not made according to the examples of the '881 patent does or does not infringe Claim 1.

127. []

128. []

129. The examples of the '881 patent actually teach a procedure which, when followed, makes a complex mixture of chemicals.

130. The complex mixture of chemicals made according to the examples of the '881 patent cannot be shown to include a compound claimed by the '881 patent.

131. []

132. []

133. []

134. []

135. [] NMR analysis has not established that a compound simultaneously has the partial connectivities and the percent weight ranges of tin and sulfur claimed by Claim 1 of the '881 patent.

136. []

137. [] Tetramethyltin, tetrabutyltin and tetra octyltin can all be used as an internal reference standard to perform quantitative NMR experiments.

138. []

139. []

140. []

141. []

142. []

143. []

144. Findings of Fact numbered 13, 14, 26, 29, 31, 33, 43, 45, 50, 71, 83, 92, 98, 99, 107, 108, 109, 113, 128, 133, 138, 139, 140, 141, 142 and 143 are repeated herein.

145. []

146. After the *Argus* trial, Morton wrote to distributors of Cardinal products; []

147. []

148. While the *Argus* case was *sub judice*, Morton contacted Cardinal's distributors and threatened to sue the distributors for infringement if they did not cease to distribute Cardinal's products.

149. []

150. After the decision by the Court of Appeals for the Federal Circuit, Morton continued to pursue Cardinal on the patents which the Court held not infringed. []

151. []

152. In light of the evidence of which Morton was aware demonstrating that the patents are invalid, this court believes that the pursuit of this litigation against Cardinal was unwarranted; however, this court cannot find that this action meets the exceptional case requirements of 35 U.S.C. §285.

IV. CONCLUSIONS OF LAW

As to Infringement

1. This is a patent infringement action arising under 35 U.S.C. §271, *et seq.*, and the declaratory judgment statute, 28 U.S.C. §2201.

2. Jurisdiction of this court and venue are pursuant to 28 U.S.C. §1338(a) and §1400(b), respectively.

3. The plaintiff, Morton International, Inc., has charged the defendants, Cardinal Chemical Company, et al., with infringement of U.S. Letter Patent Nos. 4,062,881 and 4,120,845 by the manufacture, use or sale of organotin stabilizer products known as CC7710, CC7711, CC7712, CC7712A and CC7712M.

4. Morton, as the patent owner, has the burden of proving infringement by a preponderance of the evidence. *Envirotech Corp. v. Al George, Inc.*, 730 F.2d 753, 758 (Fed. Cir. 1984); *Under Sea Industries v. Dacor Corp.*, 833 F.2d 1551 (Fed. Cir. 1987); *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 943-44 (Fed. Cir. 1990).

5. A preponderance of the evidence is:

That degree of relevant evidence which a reasonable mind, considering the record as a whole, might accept as sufficient to support a conclusion that the matter asserted is more likely to be true than not true.

Hale v. Department of Transportation, Federal Aviation Administration, 772 F.2d 882, 885 (Fed. Cir. 1985).

6. Cardinal has the burden of proving that the '881 and '845 patents are invalid under 35 U.S.C. §112. Cardinal's burden of proving the invalidity of the '881 and '845 patents is by clear and convincing evidence. 35 U.S.C. §282; *Akzo, N.V. v. E. I. du Pont de Nemours*, 810 F.2d 1148 (Fed. Cir. 1987).

7. The claims and specifications of a patent must describe the invention with sufficient particularity to enable the public to ascertain whether or not their activities infringe. *Permutit Co. v. Graver Corp.*, 284 U.S. 52, 60 (1931); *General Electric Co. v. Wabash Appliance Corp.*, 304 U.S. 364, 369 (1938); *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 232-233 (1942).

8. To show infringement of Claim 1 of the '881 patent by any Cardinal product, Morton is required to prove that

every limitation in the claims, including the limitations specifying the percent range of tin and sulfur by weight, are met by Cardinal's products. *Loctite Corp. v. Fel-Pro, Inc.*, 667 F.2d 577, 582 (7th Cir. 1981).

9. At the time of filing the Kugele applications, and at the time the Kugele patents issued, no tests were available to determine infringement of the Kugele patents. Accordingly, one skilled in the art could not determine whether a product would infringe the patents without undue experimentation.

10. The '881 and '845 patents claim compounds useful as stabilizers for vinyl chloride polymers which have specified molecular structures, as well as a specific weight percentage of tin and sulfur within the claimed molecule.

11. The claim incorporates what has been referred to in this case and in the *Argus* trial as the "connectivity" requirement. The claim further requires that the organotin compound have an amount of tin within the range of 10-42% by weight and an amount of sulfur within the range of 8-42% by weight.

12. The accused stabilizers do not literally infringe the claims of the '881 and '845 patents.

13. Morton has asserted that the manufacture or sale of Cardinal's accused products constitutes an infringement of Claim 1 of the '881 patent and inducement to infringe Claim 1 of the '845 patent.

14. Morton concedes that if the Cardinal products do not infringe Claim 1 of the '881 patent, Cardinal does not induce or contribute to infringement of the '845 patent.

15. Determining infringement requires claim construction as a preliminary step. *Atlas Powder Co. v. E. I. du Pont de Nemours & Co.*, 750 F.2d 1569, 1579 (Fed. Cir. 1984). If Claim 1, properly construed, reads on the accused stabilizers, Cardinal literally infringes that claim.

16. Claim 1 of the '881 and '845 patents claim a family of compounds which share with each and every other member of the class (a) a very specific and well-defined partial connectivity and (b) tin and sulfur contents within specified broad ranges.

17. Once the claim is properly interpreted, it must then be compared with the Cardinal defendants' CC7700 series stabilizers to determine whether each of the elements of Claim 1 of the '881 patent and '845 are present in those stabilizers. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1054 (Fed. Cir.), *cert. denied*, 488 U.S. 825 (1988).

18. Morton did not carry its burden of proof. The preponderance of the evidence shows that Cardinal's accused products contain a mixture of organotin components. [] Furthermore, the lack of specificity of all the tin and sulfur analyses submitted at trial precludes Morton from asserting that Cardinal's accused products fall within the claimed ranges for tin and sulfur in either the '881 or the '845 patent.

19. [] which were not recognized in the organotin stabilizer industry at the time the Kugele patent applications were filed. Accordingly, such analyses are legally irrelevant to the issue of infringement because reliance on such techniques would cause the patent to mean one thing at the time of issuance and another at some later date. *Raybestos-Manhattan, Inc. v. Texon, Inc.*, 268 F.2d 839 (1st Cir. 1959); *Swift Chemical Co. v. Usamex Fertilizers, Inc.*, 490 F.Supp. 1343 (E.D.La. 1980), *aff'd*, 646 F.2d 1121 (5th Cir. 1981).

20. Morton has failed to establish, by a preponderance of the evidence, that any of the accused Cardinal organotin heat stabilizer products include a compound within the scope of Claim 1 of the Kugele '881 patent, nor has Morton established, by a preponderance of the evidence, that the manufacture or sale of these products constitutes an inducement to infringe Claim 1 of the Kugele '845 patent.

21. During the trial, it was established that a person skilled in the art cannot determine whether the compounds, as claimed, actually exist. The claims require specific chemical structures for the claimed compounds, referred to as "connectivities." The term "connectivity" means how the atoms of a compound are arranged in relation to one another, i.e., how the atoms are connected by chemical bonds. The evidence has shown that it is not possible for one skilled in the art of organotin stabilizers to ascertain the actual existence of these claimed connectivities.

22. The claims of the '881 and '845 patents define compounds containing specific connectivities which, in pertinent part, consist of tin-sulfur-tin reverse ester mercaptides. None of the claims of either the '881 or '845 patents contain any process information directed to obtaining the claimed tin-sulfur-tin reverse ester mercaptide connectivity. There is no information in the patents describing how to separate or isolate the claimed compounds from other compounds contained in the complicated chemical mixture. []

23. []

24. []

25. []

26. High pressure liquid chromatography establishes that Cardinal's accused stabilizers such as CC7710 contain a mixture of components. The HPLC results of Cardinal's accused stabilizer products such as CC7710 are consistent with a complex mixture of prior art alkyltin compounds.

27. The liquid chromatographic analysis work conducted on Cardinal's accused stabilizer products and model systems provides no evidence for the presence of compounds claimed in the '881 patent.

28. NMR cannot be used to establish the weight ranges of tin and sulfur in the claimed compounds because they cannot be isolated.

29. []

30. The evidence establishes clearly and convincingly that it is impossible for a person skilled in the art to obtain tin and sulfur analyses which are specific to the compounds claimed, and that it was likewise impossible to obtain in 1974.

31. Based on all the evidence presented at trial, including elemental analyses as well as instrumental analyses, the accused products do not literally infringe the claims of the Kugele '881 or '845 patents.

32. Since there is no literal infringement, this court must determine whether there is infringement under the doctrine of equivalents. *Coleco Industries v. U.S. Int'l Trade Comm'n*, 573 F.2d 1247, 1257 (C.C.P.A. 1978).

33. Cardinal's accused products do not infringe the '881 and '845 patents under the doctrine of equivalents.

34. A chemical compound or composition that does not literally infringe a claim can infringe under the doctrine of equivalents. The doctrine allows a finding of infringement when the accused product and the claimed invention perform substantially the same function in substantially the same way to yield substantially the same result. *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*, 86 F.Supp. 191 (N.D.Ind. 1947), *rev'd*, 167 F.2d 531 (7th Cir. 1948), *aff'd*, 336 U.S. 271 (1949), *reh'g granted*, 337 U.S. 910 (1949), *aff'd*, 339 U.S. 605 (1950); *Insta-Foam Products, Inc. v. Universal Foam Systems, Inc.*, 906 F.2d 698, 702 (Fed. Cir. 1990); *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 934 (Fed. Cir. 1987) (en banc), *cert. denied*, 485 U.S. 961 (1988), *cert. denied*, 485 U.S. 1009 (1988).

35. Even if this test is met, however, there can be no infringement if the asserted scope of equivalency of what is literally claimed would encompass the prior art. *Pennwalt, supra* at 934 n.1; *Senmed, Inc. v. Richard-Allen Medical Indus., Inc.*, 888 F.2d 815, 821 (Fed. Cir. 1989).

36. A finding of equivalence is a finding of fact. *Thomas & Betts Corp. v. Litton Systems, Inc.*, 720 F.2d 1572, 1579 (Fed. Cir. 1983).

37. The purpose of the doctrine of equivalents is to make it impossible for the unscrupulous copier to make unimportant and insubstantial changes and substitutions which, although adding nothing, would be enough to take the copied matter outside the literal scope of the claim, and hence, apparently outside the reach of the law. *Graver Tank, supra* at 607; *Radio Steel & Mfg. Co. v. MTD Products, Inc.*, 731 F.2d 840, 847 (Fed. Cir.), *cert. denied*, 469 U.S. 831 (1984). To permit imitation of a patented invention which does not copy every literal detail would be to convert the protection of the patent grant into a hollow and useless thing. *Graver Tank, supra* at 607; *Thomas & Betts, supra* at 1579.

38. While a pioneer invention is entitled to a broad range of equivalents, an invention representing only a modest advance over the prior art is given a more restricted range of equivalents. *Thomas & Betts, supra* at 580. As was demonstrated during trial, the organotin stabilizer art is crowded. The Kugele patent claims are so narrow that they call for the existence of specific compounds which cannot, even now, be isolated or purified. Where a patent is narrow or the art is crowded, the range of equivalents available to the patentee may "be so narrow as to be virtually non-existent." *Parmalee Pharmaceutical v. Zink*, 285 F.2d 465 (8th Cir. 1961).

39. []

40. During the reexamination of the Kugele '881 and '845 patents, Morton kept the tin and sulfur weight per-

cent ranges in all claims of the patents. The prosecution history including the reexamination does not allow Morton to "write out" these limitations from the claims.

41. Morton has not proven by a preponderance of the evidence that the claimed connectivity exists in Cardinal products. Therefore, it is not necessary to reach the question of whether the tin and sulfur weight percentages exist. However, to make a complete record, the following analysis deals with Morton's assertion of infringement under the doctrine of equivalents.

42. Where a claim does not literally read on an accused product because one or more limitations of the claim are not met exactly, infringement may be found if such limitations are satisfied equivalently. *Graver Tank*, 339 U.S. at 608.

43. The patentee should not be able to obtain, under the doctrine of equivalents, coverage which he could not lawfully obtain from the PTO by literal claims. *Wilson Sporting Goods Co. v. David Geoffrey & Ass.*, 904 F.2d 677, 684 (Fed. Cir. 1990) (petition for cert. filed October 2, 1990, No. 90-572).

44. The patentee bears the burden of showing that a hypothetical claim constructed to encompass the accused product under the doctrine of equivalents is patentable over the prior art. *Id.*

45. Analysis under the doctrine of equivalents requires that every limitation set forth in a claim must be found in an accused product exactly or by a substantial equivalent. *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1259 (Fed. Cir. 1989); *Pennwalt, supra* at 935; *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1532-33 (Fed. Cir. 1987).

46. If a claim limitation or its substantial equivalent is not present, there can be no infringement either literally or under the doctrine of equivalents. *Julien v. Zeringue*,

864 F.2d 1569, 1571 (Fed. Cir. 1989), *cert. denied*, — U.S. —, 110 S.Ct. 276 (1990); *ZMI Corp. v. Cardiac Resuscitator Corp.*, 844 F.2d 1576, 1582 (Fed. Cir. 1988), *aff'd*, 899 F.2d 1228 (1990).

47. Under the doctrine of equivalents, it is improper to ignore claim limitations and merely compare the claimed invention's overall operation with the accused product. *Julien*, *supra* at 1570.

48. In a doctrine of equivalents analysis, each element or limitation of a claim is material and essential and it is improper to read an element or limitation out of a claim. *Moleculon Research Corp. v. CBS, Inc.*, 872 F.2d 407, 409 (Fed. Cir. 1989); *Lemelson v. United States*, 752 F.2d 1538, 1551 (Fed. Cir. 1985).

49. A multi-limitation claim cannot be converted to one or two limitations to support a finding of equivalence. *Perkin-Elmer*, *supra* at 1532. A patentee's lack of proof that a claim limitation was present by equivalency in the accused product is fatal to a charge of infringement. *Moleculon*, *supra* at 409.

50. The doctrine of equivalents does not allow the patentee to prevent the manufacture, use or sale of every product generally similar to the patented invention. Instead, substantial identity must be proven with regard to all three factors of the doctrine specified in *Graver Tank*, *supra*, which include the function performed, the means by which function is performed, and the result achieved. *Lear Siegler, Inc. v. Sealy Mattress Co. of Michigan, Inc.*, 873 F.2d 1422, 1425 (Fed. Cir. 1989) (citing *Graver Tank*, *supra* at 609-10).

51. A patentee fails to meet its burden of showing infringement of a claimed formulation under the doctrine of equivalents when its contention that the alleged infringing formulation operates in substantially the same way as the claimed formulation is dependent upon the alleged infr-

ing formulation operating by a specific mechanism and there is a second viable competing mechanism by which the formulation may operate. *American Hospital Supply Corp. v. Travenol Laboratories, Inc.*, 745 F.2d 1 (Fed. Cir. 1984).

52. []

53. The doctrine of equivalents requires establishment that something that is not literally claimed is equivalent to that which is literally claimed. Because compounds as claimed by the '881 and '845 patents have not been isolated or purified, such a determination is not possible. As found by the court in *Argus*, there is a significant doubt as to whether "equivalency" to the claimed compounds of the Kugele '881 and '845 patents could be established under any circumstances. To the extent that the plaintiff is asserting that Cardinal's products are "equivalent," the plaintiff must show that Cardinal's products are equivalent to the claims of the '881 and '845 patents, not to any of the plaintiff's products. It "is not enough merely to demonstrate equivalency" of the two commercial products, neither of which can be shown to contain the claimed compound. *Nestier Corporation v. Menasha Corporation*, 739 F.2d 1576, 1579 (Fed. Cir. 1984), *cert. denied*, 470 U.S. 1053 (1985). Morton has failed to establish by a preponderance of the evidence that the accused Cardinal products are substantially equivalent to the inventions claimed in the Kugele '881 and Kugele '845 patents.

54. To establish infringement under the doctrine of equivalents, Morton must show that a compound having a certain percent weight of tin and sulfur in the accused Cardinal products is substantially equivalent in means, function, and result to a compound with the claimed weight percent ranges for tin and sulfur claimed in the Kugele '881 and '845 patents. *Corning Glass*, *supra* at 1259; *Pennwalt*, *supra* at 935. Morton has failed to establish by a preponderance of the evidence that the accused Cardinal

products contain a compound with the claimed connectivity and an amount of tin and an amount of sulfur that is substantially equivalent in means, function and result as a claimed compound. Morton cannot ignore this limitation in the claims of the Kugele '881 and '845 patents. *Moleculon, supra* at 409. []

55. When the accused product avoids literal infringement by changing one ingredient of a claimed composition, it is appropriate for a court to consider in assessing equivalence whether the changed ingredient has the same purpose, quality and function as the claimed ingredient. *Atlas Powder Co. v. E. I. du Pont de Nemours & Co., supra* at 1579-80. [] In addition, Cardinal employs a process not taught by the patent to make its products. These chemicals and process have an effect on the products made by Cardinal and produce different compounds in its commercial products than are obtained by following the Kugele patents.

56. When a parameter of an accused product is outside of the claimed range so that there is no literal infringement, the court is to determine whether the parameter outside of the claimed range is substantially equivalent to the claimed range. *E. I. du Pont de Nemours & Co. v. Phillips Petroleum Co., 711 F.Supp. 1205, 1224 (D.Del. 1989).* [] Cardinal's tests of the various components of its stabilizers demonstrate that all of the [] used to make Cardinal's product have definite stabilizing qualities even before []

57. To the extent that Morton asserts that Cardinal's products are "equivalent," Morton must show that the Cardinal products are equivalent to the claims of the '881 and '845 patents, not to any Morton products. It is not enough merely to demonstrate "equivalency" of the two commercial products. *Nestier Corporation, supra* at 1579. Morton has failed to establish by a preponderance of the evidence that the accused Cardinal products infringe any

claim of the Kugele '881 and Kugele '845 patents under the doctrine of equivalents.

58. To the extent that Morton asserts infringement by "equivalence" because of some similarities in the process and starting materials used by Cardinal with those specified in the specifications of the '881 and '845 patents, this approach is completely inappropriate. Claims, not specifications, are infringed. See *SRI International v. Matsushita Electric Corp., 775 F.2d 1107, 1121 (Fed. Cir. 1985).*

As to Validity

59. Cardinal has the burden of proving that the '881 and '845 patents are invalid under 35 U.S.C. §§ 101, 102, 103 and 112. Cardinal's burden of proving invalidity of the '881 and '845 patents is by clear and convincing evidence. 35 U.S.C. § 282; *Akzo, N.V., supra.*

60. Under 35 U.S.C. § 282, patents are presumed valid. *Akzo, N.V., supra; Roper Corp. v. Litton Systems, Inc., 757 F.2d 1266 (Fed. Cir. 1985).* The burden of proving invalidity, often referred to as the "presumption of validity," is deemed procedural and not substantive. *Stratoflex, Inc., 713 F.2d 1530, 1534 (Fed. Cir. 1983); D. L. Auld Company v. Chroma Graphics Corporation, 714 F.2d 1144, 1147 n.2 (Fed. Cir. 1983), cert. denied, 474 U.S. 825 (1985).* The presumption has no independent evidentiary value; rather, it merely assigns to the patent challenger the initial burden of proving that the challenged patent is invalid. *SSIH equipment, S.A. v. United States International Trade Commission, et al., 718 F.2d 365, 375 (Fed. Cir. 1983).*

61. While a patent should not be held invalid because the patentee has misconceived the scientific principle of his invention, the error cannot be overlooked when the misconception is embodied in the claim. *Graver Tank, 86 F.Supp. 191, 197 (N.D.Ind. 1947); Raytheon Company v.*

Roper Corporation, 724 F.2d 951, 956 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 835 (1984).

62. In his patents, Dr. Kugele claimed a chemical compound by a specific structure. [] Since he claimed a specific structure which is not ascertainable by those skilled in the art or by any analytical methods, this error is embodied in the claims and cannot be overlooked.

63. A claim containing a limitation impossible to meet is invalid under §§ 101 and 112. *Raytheon, supra* at 956 (Fed. Cir. 1983).

64. To establish the existence of a compound for the purpose of showing actual reduction to practice of that compound, the question generally is whether, when all the circumstances are considered, there is a reasonable certainty as to the existence of the compound. *Young v. Bullitt*, 223 F.2d 347 (C.C.P.A. 1956); *Application of Breslow*, 616 F.2d 516, 523 (C.C.P.A. 1980) (concurring opinion).

65. The '881 and '845 patents are indefinite and thus invalid under 35 U.S.C. § 112, second paragraph.

66. The second paragraph of 35 U.S.C. § 112 sets forth the requirements that the claims of the patent must particularly point out and distinctly claim the subject matter of the invention. *Standard Oil Co. v. American Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985).

67. The second paragraph of § 112 requires a patentee to claim a chemical product "with sufficient particularity that it can be identified and that those who are interested in its manufacture are enabled to determine what will and what will not infringe." *Benger Laboratories Ltd. v. R. K. Laros Co.*, 209 F.Supp. 639, 642 (E.D.Pa. 1962), *aff'd*, 317 F.2d 455 (1963), *cert. denied* 375 U.S. 833 (1963); *see also Standard Oil Co.*, 774 F.2d at 453.

68. Because no one knows the precise chemical structure of the claimed Kugele compounds, and the claimed com-

pounds cannot be identified by testing, one cannot determine infringement as required by 35 U.S.C. § 112.

69. Dr. Kugele having chosen the wrong format, this court is without power to rewrite the claims in a more definite format. *See Super Products Corporation v. D. P. Way Corporation*, 546 F.2d 748, 756 (7th Cir. 1976).

70. Section 112, second paragraph, requires the claims to "provide a clear warning to others as to what constitutes infringement of the patent." D. Chisum, *Patents* § 8.03 at 8-10, 12 (1987); *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 232-33 (1942).

71. Where undue experimentation and tests are required to determine whether a product infringes a claim, the claim is invalid for indefiniteness. *Interlake, Inc. v. Weld-loc Systems, Inc.*, 213 U.S.P.Q. 154, 161-62 (C.D. Ohio 1981); *Standard Oil v. Tidewater Associated Oil Co.*, 154 F.2d 579, 583 (3d Cir. 1946); *Deep Welding Co., Inc. v. Sciaky Bros., Inc.*, 417 F.2d 1227 (7th Cir. 1969), *cert. denied*, 397 U.S. 1037 (1970).

72. The validity of a patent claim under § 112 depends on whether the subject matter contained in the claim has a clear and definite meaning when construed in light of the complete patent document. *Standard Oil Co.*, 774 F.2d at 452.

73. In *Application of Breslow, supra*, the court held that it is not imperative that the compounds be isolated in order to be claimed. The court, however, required that the compounds must in fact exist. Morton has failed to demonstrate even today that the compounds in fact exist and has failed to teach one skilled in the art how to determine the scope of the claims.

74. Because no one can determine by analytical or other means whether a given compound falls within Claim 1 of the Kugele patents, a determination of infringement is impossible. Furthermore, because no one has ever isolated the claimed compounds for comparison purposes, no ana-

lytical tests can be performed to determine whether a compound falls within the claims for a determination of either literal infringement or infringement under the doctrine of equivalents.

75. While Claim 1 of the Kugele patents appears to be detailed, there is no way to determine accurately whether a compound contains every limitation of Claim 1, which limitations are required by all the claims of the Kugele '881 and '845 patents.

76. The plaintiff's patents do not enable one skilled in the art to make and use the claimed invention with any experimentation, much less undue experimentation. The experimentation required by the Morton patent as it is claimed is exactly the same type of experimentation which was disallowed in *Application of Gardner*, 427 F.2d 786 (C.C.P.A. 1970). See also *Application of Scarbrough*, 500 F.2d 560, 565 (C.C.P.A. 1974).

77. In drafting its patent applications, Morton was entitled to claim the alleged invention as narrowly or as broadly as it chose. The plaintiff/patentee was solely responsible for drafting the claims of the '881 and '845 patents. Morton cannot now complain that it chose the wrong format. *Ex Parte Siddiqui*, 156 U.S.P.Q. 426, 428 (1967). See also *Hormone Research Foundation, Inc. v. Genentech, Inc.*, 904 F.2d 1558, 1564 *reh'g denied*, 1990 U.S.App. Lexis 17559 (Fed. Cir. Sept. 24, 1990).

78. When claims require specific limitations to exist, a patent will be held invalid where costly and lengthy independent experimentation is required to determine whether a product was within the bounds of the patent claims. *Corning Glass Works v. Anchor Hocking Glass Corp.*, 253 F.Supp. 461, 479 (D.Del. 1966) *rev'd on other grounds*, 374 F.2d 473 (3d Cir. 1967), *cert. denied* 389 U.S. 826 (1967). This standard was applied in *Standard Oil*; the court must apply the "most immediate test of sufficiency of precision in description" which is "that no inventor may

compel independent experimentation by others to ascertain the bounds of his claims." *Corning*, 253 F.Supp. at 479 (citing *Standard Oil Co. v. Tidewater Associated Oil Co.*, 154 F.2d at 582-83).

79. As established in the conclusions above related to infringement, the connectivities claimed cannot be established by one skilled in the art either now or in 1974. For the reasons recited in those conclusions, the court finds that the claims of the patents at issue fail to satisfy the requirement of definiteness under 35 U.S.C. § 112, second paragraph. Cardinal has met its burden of proof under § 112 by clear and convincing evidence. Therefore, the '881 and '845 patents are invalid.

80. The '881 and '845 patents are invalid because their specifications are not enabling as required by 35 U.S.C. § 112, first paragraph.

81. The first paragraph of 35 U.S.C. § 112 requires that the specification of the Kugele patents "enable" or teach one skilled in the art to make and use the compounds claimed therein without undue experimentation. *W. L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540, 1556 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). A patent specification must enable those skilled in the art, at the time the application was filed, to practice the claimed invention as claimed because "it is the claimed invention for which enablement is required." *Id.*

82. The first paragraph of § 112 states:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode

contemplated by the inventor of carrying out his invention.

83. The patent specifications for the '881 and '845 patents are virtually identical. All of the examples of the '881 and '845 patents are written as working examples,—i.e., written to represent work that has been actually performed in the manner specifically stated within each example. []

84. "In chemical cases, important considerations include the type of reactions, the state of the art, the representative nature of the examples, and the breadth of the claims. The question which must be asked in every case is whether the claims are, in fact, reasonable definitions of the inventions disclosed." *In re Ranier*, 377 F.2d 1006, 1012 (C.C.P.A. 1967). In the present case, the claims cannot be considered reasonable definitions of the inventions. Dr. Kugele made mixtures of compounds he used as PVC stabilizers. []

85. The '881 patent alleges to teach the formation of postulated compounds as claimed in the patent. Even with the aid of sophisticated analytical instrumentation and the use of model systems which attempt to provide the compounds claimed in the '881 patent, however, there is no evidence that such compounds exist. The clear and convincing evidence has shown that the examples of the '881 patent do not produce the postulated compounds. Rather, the examples and procedures produce a complex mixture of alkyltin mercaptides and alkyltin sulfides. The evidence established that a number of these are prior art compounds known to be useful as heat stabilizers.

86. Section 112 "requires that the scope of the claims must bear a reasonable correlation to the scope of enablement provided by the specification . . . In cases involving unpredictable factors, such as most chemical reactions and physiological activity, the scope of enablement obviously varies inversely with the degree of unpredictability

of the factors involved." *Application of Fisher*, 427 F.2d 833, 839 (C.C.P.A. 1970); see also *In re Hogan*, 559 F.2d 595, 605-06 (C.C.P.A. 1977). As noted, the chemistry in these systems is very complicated and not understood even today. Accordingly, at a minimum, it would be required to show the stabilizing activity of the claimed compound alone and some proof of the claimed structure in order for the claims to be enabling as written.

87. Those skilled in the art, by investigation should be able to make and use the invention. *Application of Gardner*, 427 F.2d 786, 789 (C.C.P.A. 1970). Requiring those skilled in the art, by investigation and by a great amount of work, to determine how to use the invention is not adequate disclosure. *Id.*

88. The evidence clearly and convincingly establishes that a person skilled in the art is unable to ascertain the claimed structures in order to avoid infringement of the '881 and '845 patent claims. Therefore, this court concludes that the language of the '881 and '845 patent claims relating to the tin-sulfur-tin reverse ester mercaptide connectivity is too vague to satisfy the definiteness requirement of § 112. *Standard Oil Co. v. American Cyanamid Co.*, 774 F.2d 448 (Fed. Cir. 1985) (when construed in light of the complete patent document, claim containing the term "partially soluble" was too vague under § 112).

89. The limitations contained in the claims of the Kugele patents are impossible to ascertain. In light of the evidence clearly and convincingly establishing that the plaintiff has never been able to either identify or isolate a compound having a structure, tin and sulfur content, or connectivity as claimed in the Kugele patents, the disclosures of both the patents are nonenabling and, therefore, invalid under 35 U.S.C. § 112, first paragraph.

90. Cardinal has proven with clear and convincing evidence that the Kugele specifications are nonenabling. Expert testimony and analytical data show that when the

procedures set forth in the Kugele specifications are followed, a multicomponent product is obtained. [] Moreover, the evidence establishes that one skilled in the art, using state of the art analytical techniques, cannot detect or isolate the claimed compound.

91. The '881 and '845 specifications disclose no analytical techniques which would have enabled a person skilled in the art at the time the application was filed to determine whether the claimed compounds could be made by following a procedure specified in the patents. Testimony by those skilled in the art has proven that analytical techniques available in 1974 (when the '881 patent applications was filed) provided no analytical evidence that the claimed compounds resulted from following the procedures specified in the Kugele patents. In fact, the testimony and other evidence shows that 1974 technology, such as chromatography, clearly would have demonstrated that products manufactured according to the specified procedures were mixtures and not the single compound taught by the examples in the '881 and '845 patents. As drafted, the '881 and '845 disclosures would not enable a person skilled in the art at the time the application was filed to make or use the claimed compounds.

92. Patent claims are reexamined only in light of patents or printed publications under 35 U.S.C. §§ 102, 103 and only new or amended claims can be examined under 35 U.S.C. § 112. *In re Etter*, 756 F.2d 852, 856 (Fed. Cir. 1985), *cert. denied*, 474 U.S. 828 (1985).

93. The claims of the Kugele patents were not amended during the reexamination proceeding, and no new claims were added during the reexamination proceeding. Therefore, the reexamination proceeding involving the Kugele patents was limited by statute only to a review of patents and printed publications under 35 U.S.C. §§ 102 and 103.

94. During reexamination proceeding, the examiner cannot consider § 112 issues, because such issues are not en-

compassed by the statutory authorization. *Patlex Corp. v. Quigg*, 680 F.Supp. 33, 36 (D.D.C. 1988); *Dresser Industries, Inc. v. Ford Motor Company*, 530 F.Supp. 303, 306 (N.D.Tex. 1981).

95. Accordingly, this court's finding of invalidity of the '881 and '845 patents under § 112 is not inconsistent with the reexamination proceedings.

96. The court having found that the plaintiff has failed to prove by a preponderance of the evidence any infringement of the patents, judgment should be entered in favor of the defendants, dismissing the plaintiff's action for infringement, and in favor of the defendants on their counterclaim of invalidity of the patents.

As to the Exceptional Case Requirement

97. The purpose of § 285 is "to compensate the prevailing party for its monetary outlays in the prosecution or defense of the suit." *Central Soya Co., Inc. v. Geo. A. Hormel & Co.*, 723 F.2d 1573, 1578 (Fed. Cir. 1983).

98. A finding of "exceptional circumstances" requires "proof of actual wrongful intent . . . or gross negligence." *Machinery Corporation of America v. Gullfiber AB*, 774 F.2d 467, 473 (Fed. Cir. 1985) (citing *Reactive Metals and Alloys Corp. v. ESM, Inc.*, 769 F.2d 1578, 1583 (Fed. Cir. 1985)). The term "exceptional" in 35 USC § 285 is equivalent to "frivolous." See *Porter v. Farmers Supply Services, Inc.*, 790 F.2d 882, 887 (Fed. Cir. 1986).

99. The court does not abuse its discretion in awarding attorneys fees to prevailing defendants where the action is brought by the plaintiff without reasonable belief in the validity of the patents. *Talon, Inc. v. Union Slide Fastener, Inc.*, 121 U.S.P.Q. 249, 255-56 (9th Cir. 1959).

100. Awards of increased damages often are made in the same case, based upon a single finding by the court that the circumstances are exceptional. See *Coleman Com-*

pany v. Holly Mfg. Co., 269 F.2d 660, 661 (9th Cir. 1959). It is the defendants' burden to establish that the present case is an exceptional case by clear and convincing evidence. *Reactive Metals Alloys Corp.*, *supra* at 1582.

101. Despite having some serious reservations as to Morton in fact retrying the *Argus* case, this court does not find that this action constitutes an exceptional case under 35 USC § 285.

102. Because of the above findings and conclusions, it is unnecessary to consider other grounds urged by the defendants for a finding of patent invalidity or unenforceability.

Now, therefore,

IT IS ORDERED that the Clerk is directed to enter judgment for the defendants in this case, dismissing the plaintiff's action for infringement with prejudice and at its costs.

IT IS FURTHER ORDERED that the Clerk is directed to enter judgment for the defendants on their counterclaim of invalidity of the patents, as patents 4,062,881 and 4,120,845 are found to be invalid.

IT IS SO ORDERED.

WILLIAM M. CATOE, JR.
UNITED STATES MAGISTRATE

January 10, 1991

Greenville, South Carolina

APPENDIX D

FILED

U.S. COURT OF APPEALS FOR THE FEDERAL CIRCUIT

APR 17 1992

FRANCIS X. GINDHART
CLERK

ORDER

Before MAYER, Circuit Judge, LOURIE, Circuit Judge,
CLEVINGER, Circuit Judge.

A petition for rehearing having been filed by the appellant in this case,

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for rehearing be, and the same hereby is, denied.

The suggestion for rehearing in banc is under consideration.

The mandate will issue on April 24, 1992.

FOR THE COURT,

/s/ Francis X. Gindhart
Clerk

Dated: April 17, 1992

cc: GORDON R. COONS
CHARLES F. SCHILL

MORTON INTL V CARDINAL CHEM, 91-1174
(DCT-83-889)

APPENDIX E

FILED
U.S. COURT OF APPEALS FOR
THE FEDERAL CIRCUIT

APR 17 1992

FRANCIS X. GINDHART
CLERK

ORDER

Before MAYER, Circuit Judge, LOURIE, Circuit Judge,
CLEVINGER, Circuit Judge.

A petition for rehearing having been filed by the cross-appellant in this case,

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for rehearing be, and the same hereby is, denied.

The suggestion for rehearing in banc is under consideration.

The mandate will issue on April 24, 1992.

FOR THE COURT,

/s/ Francis X. Gindhart
Francis X. Gindhart
Clerk

Dated: April 17, 1992

cc: GORDON R. COONS
CHARLES F. SCHILL

MORTON INTL V CARDINAL CHEM, 91-1174
(DCT - 83-889)

APPENDIX F

FILED
U.S. COURT OF APPEALS FOR
THE FEDERAL CIRCUIT

MAY 7 1992

FRANCIS X. GINDHART
CLERK

ORDER

A suggestion for rehearing in banc having been filed by the appellant in this case, and a brief amicus curiae having been filed with leave,

UPON CONSIDERATION THEREOF, it is

ORDERED that the suggestion for rehearing in banc be, and the same hereby is, declined.

Chief Judge Nies, Circuit Judge Rich, and Circuit Judge Lourie dissent. Chief Judge Nies will file an opinion at a later date.

FOR THE COURT,

/s/ Francis X. Gindhart
Francis X. Gindhart
Clerk

Dated: May 7, 1992

cc: GORDON R. COONS
CHARLES F. SCHILL

MORTON INTL V CARDINAL CHEM, 91-1174
(DCT - 83-889)

APPENDIX G

FILED
U.S. COURT OF APPEALS FOR
THE FEDERAL CIRCUIT

MAY 7 1992

FRANCIS X. GINDHART
CLERK

ORDER

A suggestion for rehearing in banc having been filed by the cross-appellant in this case, and a brief amicus curiae having been filed with leave,

UPON CONSIDERATION THEREOF, it is

ORDERED that the suggestion for rehearing in banc be, and the same hereby is, declined.

Chief Judge Nies, Circuit Judge Rich, and Circuit Judge Lourie dissent. Chief Judge Nies will file an opinion at a later date.

FOR THE COURT,

/s/ Francis X. Gindhart
Francis X. Gindhart
Clerk

Dated: May 7, 1992

cc: GORDON R. COONS
CHARLES F. SCHILL

MORTON INTL V CARDINAL CHEM, 91-1174
(DCT - 83-889)